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JOB
SERVICE
North Dakota

1988

ANNUAL PLANNING REPORT

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1988

JOB SERVICE NORTH DAKOTA
1000 EAST DIVIDE
BISMARCK, NORTH DAKOTA 58501

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I. INTRODUCTION

Just before Thanksgiving Day 1987, the May future price quote for hard red spring wheat at Minneapolis was $2.97 per bushel. During that same week, the President and members of the U.S. House and Senate concluded an initial budget reduction package which provided for a decrease of 2 percent in future agricultural price support programs. Agricultural land values, producer ability to borrow, and the solvency of the rural tax base rise and fall in response to changes in agricultural earnings capacity. Commodity subsidies, in the face of large world carry-over of agricultural products, have been a major determinant of U.S. market prices. The crucial role of subsidies in farm income makes the joint budget agreement as important as world supply and demand to investor perceptions of long-term earnings capacity. Policy decisions which set the long-term framework for the economy of the Plains states, and the economic and demographic structure of the region, rather than short-term movements in futures markets, are the focus of the Annual Planning Report.

The functioning of North Dakota's economy and labor market are, in many respects, a consequence of the context within which they exist. And that context, for the state's agricultural industry, energy, and tourist markets, is in many significant ways determined by national and world events.

Similarly, the economy of any community within the state depends on events in the trade area it serves. Local job opportunities cannot be understood without some knowledge of the economic structure and demographic processes at work in the larger market served by the community. The Annual Planning Report identifies the primary economic and demographic characteristics which form the context of local labor markets, and presents narrative and tabular information facilitating substate labor market analysis. A key objective of this report is to add a new dimension to the knowledge of the local or industry analyst.

In addition, this report introduces sources of data available only through the Research and Statistics section of Job Service North Dakota, as well as providing a documentation of public information available from other sources. A major purpose of this report, then, is to act as an introduction to regularly produced and more specialized Labor Market Information publications.

One of the major reasons to study labor markets is that job holding has economic and social consequences for individuals, families, and the local expressions of such institutions as market exchange, education, and government -- entities required to form whole communities. Most statewide labor market research efforts, however, are funded to serve national rather than local objectives, or have exclusively economic purposes as their goal. As a result, our ability to directly link jobs and their associated income with individuals, their spending and lifestyles, and the systematic ways in which those behaviors are woven together is extremely limited. Even so, in order to draw out some of the potential consequences of labor market trends, it is essential to suggest how jobs, earnings, and community are constrained or given new opportunities by the structure of changing conditions. The interpretations of the data in this report are presented as one perspective. Our purpose is to illustrate how the data can be applied to current problems.

Petroleum prices so pervade production, transportation, and consumer costs that their fall during 1985 can be considered among the chief reasons that the Consumer Price Index in 1986 fell below the 2 percent growth rate. This fact also serves to illustrate the point that consumer price changes are product- and services-specific.

Inflation is selective. However, its consequences may be more complex. Indeed, fuel and petroleum-based agricultural chemical price decreases are frequently cited as among the reasons that farm income has steadied. Future decreases in petroleum prices of the magnitude experienced between 1982 and 1986 are unlikely over the remainder of the decade. Despite the fact that a price-depressing national economic slowdown or recession is anticipated, modest real price increases for energy, a basic economic building block, are forecast. It is clear, then, that while some segments of North Dakota's economy will benefit from petroleum price increases, the costs of agricultural chemicals and consumer prices for petroleum products will also rise. If we look beneath the surface of nearly any summary measure, such as the Consumer Price Index, trends in the price of a major commodity, or the unemployment rate, we find that each segment of the community experiences costs and benefits differently. Trends and conditions in the economy rarely have one exclusive, and common, outcome for all segments of the community. This report is intended to provide information facilitating impact analysis of policy decisions and economic trends affecting the labor market.

North Dakota's labor market underwent an energy industry boom in the first few years of the decade. However, during 1983 and 1984, the number of nonfarm wage and salary jobs decreased at a rate that can suitably be referred to as a regional "bust." Underlying the energy-based boom and bust cycle, was an agricultural recession. The recession in agriculture was associated with a rate of farm loss which saw more farms cease operating between 1980 and 1986 than during the whole of the preceding decade. Even though the rapid pace of the regional bust decelerated during 1985, problems continued in agriculture. By 1986, the joint and cumulative effects of the problems in agriculture and energy served to create the most difficult labor market conditions faced on a statewide basis since the beginning of the decade.

In contrast to labor market conditions in 1986, employment in many nongovernment services-producing industries began to expand during the first quarter of 1987 (1987I). By midyear, it was evident that employment growth was taking place in most private sector services-producing industries. In addition, the rate of decrease in construction industry employment slowed substantially, and by midsummer (1987II) the manufacturing industry had experienced four consecutive quarters of continuous (but extremely modest) growth. Finally, employment in the mining industry, during the second half of 1987, stabilized and then began a period of slow but sustained growth.

During 1988 and 1989, it appears that total nonfarm employment growth will advance at a rate very near to the 0.6 percent annual growth rate projected by the state's private forecasting service. New employment opportunities are likely to conform to recent historic, and underlying, labor market trends. It is highly probable that new job opportunities will be limited to a handful of geographic areas and industries. Moreover, the labor market of the immediate future is governed by agricultural markets, price increases in oil, and policy decisions whose timing is very uncertain. Improvement is expected over the long term in the conditions which bring about employment. However, whether or not these conditions will bring about observable benefits in the finite period of 1988 and 1989 is an unmeasured probability.

Compared to the mid-1980s, the balance of the years remaining in the decade have the potential to demonstrate sustained economic improvement. However, if current trends persist, North Dakota will close the decade with less than three quarters of the farm/ranch operations that it started with. Consequently, even under improving economic conditions for agriculture, farm personal income passes through the hands of fewer farm families. Even if real farm personal income grows, the reduction in the number of farm consumers has implications for the labor market. With fewer consumers, trade areas must expand rapidly simply in order to generate the same volume of business. Employment in retailing, and jobs relating to the provision of services to individuals, are becoming increasingly urbanized. The urbanization of job opportunities in North Dakota is not a recent phenomenon, but the pace at which it has recently taken place is. The rapid loss of farm operations can only serve to accelerate and extend the process.

The implications of the shift away from employment in the goods-producing industries of agriculture, mining, manufacturing, and construction, are far reaching. In comparison to the dominance of production occupations in goods-producing industries, the occupational structure of the services-producing sector tends to be divided between occupations that have earnings either much greater than, or substantially less than, earnings associated with production occupations. This fact has implications for the number of earners required in each family to sustain a constant level of real earnings.

Transition in the distribution of occupational demand, earnings opportunities, and the increase in the number of households with more than one worker, in turn, substantially alters consumption patterns and subsequent employment growth. Even though North Dakota's economy is expected to improve during the balance of the decade, the improvement will have a starkly different character than the last period of employment growth. Nonagricultural employment growth in the 1976-83 period was characterized by major advances in mining and construction employment. The 1986-89 period, on the other hand, will be dominated by employment growth in services-producing industries.

II. THE NATIONAL ECONOMY

Employment rose to a seasonally-adjusted 119,952,000 persons (household survey basis) during July of 1987, up 1.8 million over July of 1986. Unemployment fell to a seasonally adjusted 6.0 percent of the civilian labor force during July, down a full percentage point from the annual average of 7.0 percent for the whole of 1986. More people were finding jobs as the participation rate (the proportion of the civilian adult population either working or looking for work) rose by 0.2 percent over the previous July to 65.6 percent of the nation's adults.

During 1988-89, the nation's economy is expected to:

* Show improvement in the trade deficit.
* Supply an increasing share of its petroleum needs through imports.
* Demonstrate slow growth in goods-producing industries.
* Continue growth in services-producing employment.
* Produce sufficient growth in wage earnings to exceed inflation.
* Experience increased inflation.
* Respond to higher inflation through increased interest rates.
* Run a greater risk of recession.

Employment growth during the summer of 1987 represented, in most respects, an extension of employment growth identified in Table 1[1] for 1985 and 1986. On an annual average basis, the number of employed nonagricultural workers increased during 1986

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[1] The data in Table 1 represents the interview responses of adults to the Census Bureau's Current Population (household) Survey. Because there is a difference in the technique of collecting the data, different questions raised, individuals working more than one job, and for other reasons as well, data from household surveys will yield a somewhat different picture of events in the labor market than will surveys of establishments. Individuals on vacation, sick leave, or who are not at work for other reasons, but who are employed, are excluded from Table 1.

Table 1
Persons at Work in Nonagricultural Wage and Salary Jobs by Industry for the United States 1985 and 1986 Annual Averages (In Thousands)

	1985			1986			Change 1985-1986	
	Persons At Work	On Full-Time Schedules Number	Row Percent	Persons At Work	On Full-Time Schedules Number	Row Percent	Persons At Work Number	Percent
Wage and Salary Workers*	**90,739**	**74,192**	**81.8**	**93,181**	**76,235**	**81.8**	**2,442**	**2.7**
Goods-Producing	**25,777**	**23,786**	**92.3**	**25,994**	**24,090**	**92.7**	**217**	**0.8**
Mining	856	814	95.1	797	752	94.4	-59	-6.9
Construction	5,410	4,722	87.3	5,621	4,976	88.5	211	3.9
Manufacturing	19,511	18,250	93.5	19,576	18,362	93.8	65	0.3
Durable Goods	11,772	11,246	95.5	11,769	11,275	95.8	-3	0.1<
Non-durable Goods	7,739	7,004	90.5	7,807	7,087	90.8	68	0.9
Services-Producing	**64,962**	**50,406**	**77.6**	**67,187**	**52,145**	**77.6**	**2,225**	**3.4**
Transportation and Public Utilities	6,790	6,216	91.5	6,883	6,299	91.5	93	1.4
Trade	19,526	13,514	69.2	20,069	13,847	69.0	543	2.8
Finance, Insurance, and Real Estate	6,149	5,469	88.9	6,555	5,832	89.0	406	6.6
Service Industries	27,736	20,758	74.8	28,821	21,616	75.0	1,085	3.9
Public Administration	4,761	4,449	93.4	4,859	4,551	93.7	98	2.1

SOURCE: "Employment and Earnings," US DOL/BLS, Vol. 33, No. 1, (January) 1986 and Vol. 34, No. 1, (January) 1987 (Table 32).
*Current Population (household) Survey Data; totals may not add due to rounding; excludes self-employed and unpaid family workers. Part-time employees are defined as individuals working between 1 and 34 hours per week.

Table 2
Real Net Export of Goods
(Seasonally Adjusted at Annual Rates)

Billions of 1982 Dollars

Change From Preceding Quarter

	Level	1986		1987	
	1987 II	III	IV	I	II
Net Merchandise Exports	-157.5	-17.7	14.0	12.5	9.0
Merchandise Exports	271.1	10.0	8.6	2.0	12.4
Agricultural	33.4	3.8	2.9	-2.5	2.2
Nonagricultural	237.7	6.2	5.6	4.5	10.3
Merchandise Imports	428.6	27.7	-5.4	-10.5	3.4
Petroleum	72.3	14.3	-8.0	-9.0	2.8
Nonpetroleum	356.2	13.5	2.7	-1.5	0.5

Source: Adapted from "The Business Situation," Survey of Current Business, 7/87, Vol. 67, No. 7.

by 2.4 million (2.7%), with the vast majority of those who found work (2.2 million) finding jobs among industries in the services-producing sector.

On the other hand, the number of individuals working in the mining industry decreased during 1986, by an estimated 59,000 nationwide (-6.9%). Employment in one other nonagricultural goods-producing industry, durable goods manufacturing, declined by 3,000 persons from 1985 to 1986.

Constraints to employment growth in goods-producing industries are partly reflected in the merchandise trade imbalance between the United States and its trading partners. Although the fall in the value of the dollar since the winter of 1985 contributed to three quarters of improvement in agricultural trade (see Table 2), and four quarters of improvement in nonagricultural exports, data for the second quarter of 1987 revealed a continued $157.5 billion (annualized) merchandise trade deficit. The prominence of petroleum imports in the nation's trade deficit helps explain the 6.9 percent fall in domestic employment in the mining industry recorded in Table 1.

Seasonally-adjusted tabular data for the second quarter of 1987 and 1986, from monthly surveys of establishments (see Table 3), also reveal a pattern of employment weakness in goods-producing industries and a pattern of growth in services-producing industries. The change in the number of jobs worked in each industry, as opposed to the number of persons working those jobs, suggests that job opportunities (the number of full- and part-time jobs) in goods-producing industries through the second quarter of 1987 have failed to keep pace with the rest of the economy. Indeed, even though the unemployment rate for July stood at 6.0 percent, Current Population Survey estimates still indicated that 7.2 million persons were searching for employment and that 1.9 million of those had been doing so for a period of 15 weeks or more.

While merchandise imports can be related to employment dislocation in the manufacturing and mining industries, imports can also be said to be largely responsible for limiting increases

Table 3
Seasonally Adjusted
Nonagricultural Wage and Salary Employment
1986 II to 1987 II
(In Thousands)

	1986 II	1987 II	1986-87 II Change	
Industry of Employment	N	N	N	%
Total Goods-Producing	**24,952.3**	**24,757.3**	**-195.0**	**-0.8**
Mining	794.3	734.0	-60.3	-7.6
Construction	4,964.3	5,008.7	44.4	0.9
Manufacturing	19,193.7	19,014.7	-179.0	-0.9
Durable Goods	11,366.7	11,175.3	-191.4	-1.7
Nondurable Goods	7,827.0	7,839.3	12.3	0.2
Total Services-Producing	**74,895.6**	**76,950.7**	**2,054.9**	**2.7**
Transportation, Communications, and Utilities	5,232.7	5,347.3	114.6	2.2
Wholesale Trade	5,855.0	5,776.0	-79.0	-1.3
Retail Trade	17,902.0	18,209.3	307.3	1.7
Finance, Insurance, and Real Estate	6,261.3	6,573.3	312.0	5.0
Services	22,940.3	24,011.3	1,071.0	4.7
Government	16,704.3	17,033.3	329.0	2.0
Total*	**99,848.0**	**101,708.0**	**1,860.0**	**1.9**

* Establishment data, totals may not add due to rounding.

Source: Employment and Earnings (Table B-4)
USDOL/BLS, Vol. 34, No. 9, September 1987, and Vol. 33, No. 9, September 1986.

in inflation. For selected categories of consumer merchandise, wholesale goods, and services in which imported goods are a large component of the cost of service delivery, merchandise imports have helped contain the nominal rate of inflation to a decade low.

The inflation rate during 1985 and 1986 and components of the Consumer Price Index are presented in Table 4. The total rate of inflation during 1986 was extremely modest when judged in terms of recent historic standards. However, not all costs rose at the same 1.9 percent rate on an annual average basis. Certain historically volatile components experienced rapid deflation during the year, while other segments demonstrated strong trend-based inflationary increases.

Petroleum price decreases, and expanded reliance on imported crude and petroleum distillates, contributed to deflation in the Consumer Price Index for home heating and motor vehicle fuels. And motor fuel price decreases played a major role in decreasing the overall rate of inflation from 3.6 percent in 1985 to 1.9 percent during 1986.

Imports of appliances and apparel also helped hold down the total rate of inflation. Apparel and upkeep rose only slightly (0.9%), and a decrease in prices (-2.4%) for appliances were both partly the result of continued foreign competition for the domestic consumer dollar.

In contrast, the price of many services rose substantially during 1986. Most services (with travel being an exception) are not subject to foreign competition. And price rises for these categories of consumption continue a multi-year trend. Medical care services, for example, rose 7.7 percent, entertainment 3.4 percent, and educational expenses 8.0 percent on an annual average basis over the year. Prices for selected services rose at rates two to four times greater than the average rate of inflation during 1986. Essential services without foreign competition, such as medical care and education, frequently rose in price much faster than prices for discretionary services.

Recent data, then, indicates that inflation varies widely

Table 4
Consumer Price Index for All Urban Consumers:
U.S. City Average, by Selected Expenditure Category, 1984 to 1986

	1984	1985	1986	1984-85 Percent Change	1985-86 Percent Change
ALL ITEMS	311.1	322.2	328.4	3.6	1.9
Food and beverages	295.1	302.0	311.8	2.3	3.2
Food	302.9	309.8	319.7	2.3	3.2
Food at home	292.6	296.8	305.3	1.4	2.9
Cereals and bakery products	305.3	317.0	325.8	3.8	2.8
Meats, poultry, fish and eggs	266.6	263.4	275.1	-1.2	4.4
Dairy products	253.2	258.0	258.4	1.9	0.2
Fruits and vegetables	317.4	325.7	328.7	2.6	0.9
Food away from home	333.4	346.6	360.1	4.0	3.9
Housing	336.5	349.9	360.2	4.0	2.9
Shelter	361.7	382.0	402.9	5.6	5.5
Renters' costs	108.6	115.4	121.9	6.3	5.6
Homeowners' costs	107.3	113.1	119.4	5.4	5.6
Maintenance and repairs	359.2	368.9	373.8	2.7	1.3
Fuel and other utilities	387.3	393.6	384.7	1.6	-2.3
Fuels	485.5	488.1	463.1	0.5	-5.1
Fuel oil, coal, and bottled gas	641.8	619.5	501.5	-3.5	-19.0
Gas (piped) and electricity	445.2	452.7	446.7	1.7	-1.3
Other utilities and public services	230.2	240.7	253.1	4.6	5.2
Telephone services	187.8	195.1	204.6	3.9	4.9
Local charges	161.4	174.1	191.8	7.9	10.2
Household furnishings and operation	242.5	247.2	250.4	1.9	1.3
House furnishings	199.1	200.1	201.1	0.5	0.5
Furniture and bedding	222.8	228.8	233.9	2.7	2.2
Appliances including TV and sound equipment	148.5	143.0	139.5	-3.7	-2.4
Television and sound equipment	102.0	96.9	92.8	-5.0	-4.2
Household appliances	188.9	184.7	183.8	-2.2	-0.5
Refrigerator and home freezer	196.4	194.3	192.4	-1.1	-1.0
Apparel and upkeep	200.2	206.0	207.8	2.9	0.9
Apparel commodities	187.0	191.6	192.0	2.5	0.2
Apparel commodities less footwear	183.2	188.1	188.8	2.7	0.4
Men's and boys'	192.4	197.9	200.0	2.9	1.1
Women's and girls'	163.6	169.5	168.0	3.6	-0.9
Infants' and toddlers'	287.0	299.7	312.7	4.4	4.3
Transportation	311.7	319.9	307.5	2.6	-3.9
Private transportation	306.6	314.2	299.5	2.5	-4.7
New vehicles	208.0	214.9	224.1	3.3	4.3
Motor fuel	370.7	373.8	292.1	0.8	-21.9
Gasoline	370.2	373.3	291.4	0.8	-21.9
Gasoline, unleaded regular	213.0	215.1	166.3	1.0	-22.7
Other private transportation	273.3	287.6	303.9	5.2	5.7
Other private transportation services	295.0	312.8	333.9	6.0	6.7
Automobile insurance	326.3	359.5	407.2	10.2	13.3
Automobile finance charges	165.5	161.0	146.5	-2.7	-9.0
Public transportation	385.2	402.8	426.4	4.6	5.9
Airline fare	443.0	470.9	490.2	6.3	4.1
Intercity bus fare	436.3	466.6	514.3	6.9	10.2
Medical care	379.5	403.1	433.5	6.2	7.5
Medical care commodities	239.7	256.7	273.6	7.1	6.6
Prescription drugs	234.3	256.5	278.6	9.5	8.6
Tranquilizers and sedatives	204.4	234.8	259.2	14.9	10.4
Pain and symptom control drugs	189.3	205.2	220.9	8.4	7.7
Nonprescription drugs and medical supplies	163.3	171.2	179.1	4.8	4.6
Eyeglasses	140.1	145.3	149.9	3.7	3.2
Medical care services	410.3	435.1	468.6	6.0	7.7
Professional services	346.1	367.3	390.9	6.1	6.4
Physicians' services	376.8	398.8	427.7	5.8	7.2
Dental services	327.3	347.9	367.3	6.3	5.6
Other medical care services	488.0	517.0	562.6	5.9	8.8
Hospital and other medical services	210.6	224.0	237.4	6.4	6.0
Hospital room	670.9	710.5	753.1	5.9	6.0
Entertainment	255.1	265.0	274.1	3.9	3.4
Other goods and services	307.7	326.6	346.4	6.1	6.1
Tobacco products	310.0	328.5	351.0	6.0	6.8
Personal care	271.4	281.9	291.3	3.9	3.3
Toilet goods and personal care appliances	269.6	278.5	287.9	3.3	3.4
Personal and education expenses	365.7	397.1	428.8	8.6	8.0
School books and supplies	322.8	350.8	380.3	8.7	8.4
Personal and educational services	375.6	407.7	440.1	8.5	7.9
Tuition and other school fees	189.8	207.0	224.1	9.1	8.3
College tuition	189.9	207.2	224.0	9.1	8.1
Elementary and high school tuition	189.7	206.5	224.2	8.9	8.6

SOURCE: "CPI Detailed Report January 1986," USDOL/BLS, (March) 1986 and (March) 1987.

from sector to sector. Individuals, like the elderly, who frequently use medical services, or younger individuals attending school, were far more likely to experience inflationary pressures than were home owners purchasing appliances or heating and cooling utilities.

Nationally, aggregate wages more than kept pace with the rate of inflation. Total wages covered by the nation's unemployment insurance laws rose by 5.3 percent to $1.946 trillion during 1986. The number of jobs grew faster than total wages, forcing the average wage per job to grow at a slower 4.2 percent. The average monthly unemployment insurance covered wage, an amount corresponding closely to gross wages and salaries, rose to an average of $1,684 per month during 1986.

Wages and salaries paid under covered employment represented 93.1 percent of all personal income from wages and salaries during 1986. The growth rate for total covered wages was lower during 1986 than during the preceding two years (9.9% in 1984, and 7.6% in 1985). However, the growth in wage and salary disbursements is expected to accelerate as employment and hours of work in manufacturing begin responding to improvements in the opportunities for merchandise trade exports.

And opportunities for exports are increasing as the value of the dollar falls.[2] "A primary cause of the improvement in U.S. competitiveness has been the sharp drop in the value of the dollar ... The Federal Reserve's index of the dollar's foreign exchange value fell 39 percent from February 1985 to May 1987. The depreciation was particularly large against the Japanese yen and the West German mark. The dollar fell less against the currency of Canada, our most important trading partner ... (and) ...declined less or ... increased slightly in comparison with the currencies of newly industrialized countries." (Financial Letter

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[2] Weighted Average Exchange Value of the U.S. Dollar

1982	$116.54	1987	Feb.	99.46
1983	125.34		Mar.	98.99
1984	138.19		Apr.	97.09
1985	143.01		May	97.78
1986	112.22		June	99.36

1987)[3] However, even with this decline in the dollar, the positive impacts on exports and employment are expected to lag.

Due in large part to the fall in the value of the dollar, employment in manufacturing (establishment-based estimates of the number of jobs) has begun to rise. During recovery from the national recession of 1980, employment in manufacturing rose to 20.2 million jobs in 1981. It fell again to 18.8 million jobs during the recession of 1982. While the number of services-producing jobs increased by an annual average of 2.27 million from 1985 to 1986, manufacturing employment continued to lag. Employment in durable goods manufacturing dropped through November of 1986 and then grew slowly back to 11.194 million jobs by July of 1987 (in comparison to 11.199 million a year earlier), despite the far more radical decrease in the value of the dollar. The turnaround in nondurable goods manufacturing occurred a month earlier and, with slightly stronger growth stood at 7.904 jobs in July of 1987 (in comparison to 7.741 million a year earlier). As foreign goods become more expensive and exports less expensive, especially relative to countries such as Japan and Germany where the change in currencies values has been most dramatic, U.S. production for both the domestic and foreign markets is expected to increase.

Just prior to the stock market crash of October 19, 1987, the forecast outlook generally focused on the declining value of the dollar. The dollar's fall improved prospects for exports and raised the price of imports. The dollar's fall, then, also put upward pressure on inflation which, in turn, was expected to put upward pressure on interest rates. Rising interest rates would eventually lead to a substantial slowdown in growth or a recession in 1988-1990.

Expanding U.S. exports were expected to raise manufacturing employment, hours worked, wage demands, and increase plant capacity utilization. As manufacturing output increased and the complex of industries supporting manufacturing became more active, transportation, materials, and labor market bottlenecks would increase and raise materials prices and wages. This acceleration, to meet domestic and foreign consumer demand, was expected to bring about materials price inflation with wage increases adding even more to an escalating Consumer Price Index.

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[3] References in parenthesis indicate literature cited.

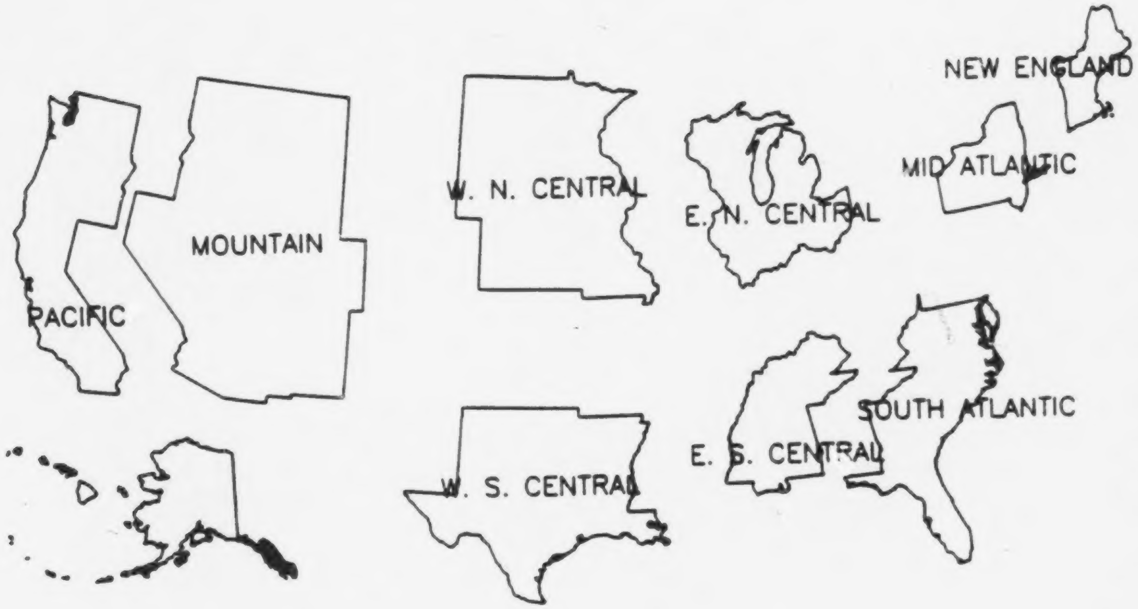
The anticipated response of the Federal Reserve Bank was a "fear of inflation induced" increase in interest rates which would slow the economy. This "policy-induced recession ..." (it was suggested in the late summer of 1987) "... is more likely after the 1988 presidential elections. By then, the economy will be in or close to a pre-recession ... The magnitude of the contraction will be determined largely by how hard the Fed steps on the brakes, which ... will be determined by how high and how fast inflation rises over the next 18 months." (Chimerine 1987a:2) But inflation and interest rates were also expected to rise for other reasons as well.

The falling dollar, the solution to many of the nation's trade problems, in several forecasts became at the same time the culprit in recession. In one outlook, the effects of the dollar's decrease in value led to the withdrawal of foreign investment. In effect, foreign investors were expected to move their funds to holdings in countries with appreciating currencies. The flight of capital from the U.S. was expected to raise interest rates, slowing domestic investment and bring about recession. At the same time, most forecasters assumed that the lower valued dollar would give rise to inflation among products (e.g., motor vehicles, industrial equipment, components, appliances, and apparel) which to a significant degree have become the province of foreign exporters. Writing in the summer of 1987, Hakkio and Roberts suggested that "Import prices would be expected ... to rise 20 percent in response to the 33 percent decline in the dollar" and eventually give rise to an increase in interest rates as the Federal Reserve Board of Governors sought to raise interest rates.(1987:35)

Pre-crash analysis generally held to the following assumptions about trends over the remainder of the decade: (A) the merchandise trade deficit would gradually improve with oil imports averaging "... $84 billion in 1988-90, up significantly from the $66 billion average in 1984-86" (Hakkio and Roberts 1987:40), (B) inflation would rise with the Consumer Price Index at annual rates of 3.8 percent at the end of 1987 and 4.5 percent in 1988 (Economic Outlook 1987:20), (C) slower growth in the number of jobs with a 2.2 percent increase declining towards a 1.4 percent increase for 1988 and 1989, and (D) an increase in the unemployment rate growing from a projected 6.0 percent in 1987 to 6.8 percent in 1989.

Post-crash analysis suggests, however, that the policy-induced recession expected after the presidential election may arrive before that time. "The odds that a recession will occur in 1988 have risen dramatically thanks to the market crash, and nearly all economic forecasters are cutting back their estimate for growth ..."(Pennar, et al., 1987:46) The market's crash brings about two factors which are likely to precipitate recession: (1) shared positive consumer and business "expectations" about the economy are no longer as optimistic as they once were, and (2) fewer assets against which to borrow, primarily for durable consumer goods. These factors are now expected to limit economic activity, driving down federal tax revenues and worsening the federal budget deficit in the remaining years of the decade.

III. THE REGIONAL CONTEXT



The common geographic, climatic, population, transportation, and economic characteristics of the states in the West North Central Region will continue to distinguish the Region's performance from the rest of the nation during the balance of the decade:

- Employment and population growth will continue to gravitate towards major metropolitan areas.
- Urban area employment growth is associated with the expansion of services-producing industries.
- Low personal income growth compared to the nation is expected to persist over the forecast horizon.

Regardless of the national slowdown which may be associated with the stock market crash, or result from policy responses to it, the rate of employment growth in the Census Bureau's West North Central Region appears likely to continue its recent historic pattern of slow growth relative to the nation as a

Table 5
Employed Civilian Workers
Annual Averages for 1982 and 1986 by Census Region
(in thousands)

	Persons Employed		1982-86 Change	
Region	1982	1986	N	%
New England	5,875	6,455	580	9.9
Middle Atlantic	15,520	16,827	1,307	8.4
East North Central	17,522	18,837	1,315	7.5
West North Central	7,847	8,361	514	6.6
South Atlantic	16,436	18,890	2,454	14.9
East South Central	5,783	6,374	591	10.2
West South Central	10,812	11,600	788	7.3
Mountain	5,230	5,898	668	12.8
Pacific	14,521	16,399	1,878	12.9
Total	**99,546**	**109,641**	**10,095**	**10.1**

Source: "Geographic Profile of Employment and Unemployment, 1986," USDOL, Bulletin 2279 (May) 1987 and Bulletin 2170 (May) 1983.

whole.

Since the national recession of 1982, the West North Central Region of the United States has shown the slowest employment growth rate of any Region. The data in Table 5 outlines total employment growth for 1982 to 1986. With the number of employed civilians increasing by only 6.6 percent, the West North Central Region's growth rate was less than half the 14.9 percent growth rate of the fastest growing Region -- the South Atlantic Region.

But the West North Central Region is not an isolated example of slow economic growth. Employment growth in both southern and western Plains states, as a whole, represented the slowest growth of any geographic or economic ecology in the nation. The number of employed civilian workers rose by 7.3 percent in the West South Central Region, only slightly faster than growth in the West North Central Region. The closely related economies of the northern and southern Great Plains have produced similar rates of slow employment growth over the course of the nation's current

Table 6
Employed Civilian Workers
Annual Averages for 1982 and 1986
for the West North Central Region and
Its Major Metropolitan Statistical Areas
(in thousands)

	Persons Employed		1982-86 Change	
	1982	1986	N	%
West North Central Region	7,847	8,361	514	6.6
Minneapolis-St. Paul MSA	1,094	1,223	129	11.8
Kansas City MSA	620	784	164	26.5
MSA Subtotal	1,714	2,007	293	17.1

Source: "Geographic Profile of Employment and Unemployment, 1986," USDOL, Bulletin 2279 (May) 1987 and Bulletin 2170 (May) 1983.

expansion.

The West North Central Region's 517,825 square miles comprise 14.3 percent of the nation's total land area. However, the Region contains only 7.3 percent of the country's population, and a disproportionately lesser 7.0 percent of its personal income (1986 reference period). These factors are reflective of elements common to the states of the Region.

The states of the West North Central Region share certain common features when contrasted with the rest of the country. The Region's states are geographically remote from the balance of the country, share the environmental constraint of low rainfall, a low population base, and a greater dependence upon production agriculture, forestry, and mining than other regions of the country. Economic and demographic processes affecting one state in the region are likely to follow these common dimensions without respect to political boundaries. This means that the labor market consequences of economic and demographic change for

Table 7
Personal Income for 1982 and 1986 by Region
(in Millions of Dollars)

Region	Personal Income		Percent Change 1982-1986
	1982	1986	
New England	156,242	218,635	39.9
Middle Atlantic	463,046	615,400	32.9
East North Central	470,521	603,815	28.3
West North Central	192,394	245,926	27.8
South Atlantic	410,442	576,344	40.4
East South Central	132,333	170,991	29.2
West South Central	281,208	342,123	21.7
Mountain	130,084	171,941	32.2
Pacific	427,228	584,341	36.8
Total	**2,663,498**	**3,529,522**	32.5

Source: Bureau of Economic Analysis (Microfiche), August 1987.

the individual states are more likely to be a matter of degree rather than of kind.[1]

In addition to relatively slow job growth, features characterizing the Region are a slow population growth, the gravitation of employment and population to the larger communities and trade centers within the Region, comparatively low average wages, and a deterioration of the income-producing capacity of the key industries in the Region. It appears, however, that the Region's economy has descended to a plateau, having reached, perhaps, a positive turning point in 1987.

Employment in the Region has tended to gravitate towards its major metropolitan centers. Employment growth rates for the Region and its two major metropolitan areas are illustrated in Table 6. These data reveal that over half (293,000 or 57%) of the growth in the number of employed civilians in the West North

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[1] Six of the seven states in the Region are among the top ten agricultural exporting states in the nation. (World Food Trade 1987:55)

Central Region, since the last recession, took place in the Kansas City, Missouri, and Minneapolis-St. Paul, Minnesota, Metropolitan Statistical Areas. Employment growth rates of 26.5 percent and 11.8 percent respectively, for the two metropolitan areas, were far higher than for the more rural balance of the Region. The higher urban growth rate is consistent with the national pattern of industrial growth in services-producing industries and comparative stagnation and decline in goods-producing industries.

Employment in goods-producing industries, such as agriculture, requires frequent worker contact with geographically dispersed physical resources, while services employment does not. With services employment less tied to particular localities, its firms can take advantage of the economies of scale available in metropolitan areas.

Population and personal income growth are, in large part, consistent with the overall rate of job growth and movement towards urban areas in the Region.

Population change within the Region, according to data from the Bureau of Economic Analysis, is patterned along lines comparable to growth in employment opportunities. The population of states with major metropolitan areas is also the fastest growing in the Region. Population growth between 1982 and 1986 stood at 2.6 percent for Missouri and 2.0 percent for Minnesota, while Iowa recorded a 2.0 percent loss in population.

Personal income growth for the western Plains states has also been slow in comparison to the nation as a whole. The West South Central and West North Central Regions of the country rank last and second-to-last in personal income growth since the recession of 1982 (see Table 7). Within the West North Central Region, itself, personal income growth was, again, greatest among the more urbanized states of Missouri (at 30.8% from 1982 to 1986) and Minnesota (32.3%). The slowest growth rates were found in the more rural and agriculturally dependent states of North Dakota (20.2%) and Iowa (20.9 %).

The modest growth of personal income in the West North

Central Region is partially attributable to the declining value of cash receipts from farm marketings. Although personal income grew from $232.9 billion to $245.9 billion from 1982 to 1986 (see Table 7), cash receipts from farm marketings in the Region dropped in value. Most recently, the dollar value of crops, livestock, and livestock products sold by farm and ranch operators in the Region's states declined by 7.4 percent from $32.1 billion to $29.7 billion from 1985 to 1986. (Data--Agricultural Outlook 1987:57)

Personal income growth in the region is limited by other factors as well. The average monthly wage, of workers covered by state unemployment insurance laws, in the West North Central Region is presented in Table 8. The average wage in the Region stood at 90.7 percent of the average wage in the nation.[2] In other words, the economic consequence of job growth for personal consumption, savings, and debt retirement in the Region was 9.3 percent less per job than in the nation as a whole. Slow growth in the number of job opportunities is consistent with slow growth in personal income. But, in addition, the employment growth which does occur can not be expected to have the same secondary or multiplier impacts on further job growth which might be expected on a national basis.

A combination of comparatively low average wage and salary earnings and slow growth in the number of jobs, and the declining cash value of farm marketings, has helped constrain personal income growth in the West North Central Region to the second lowest growth rate in the nation. It appears, however, that the situation in the Region's key industry, agriculture, has stabilized. Farm land values in both the Ninth and the Tenth Federal Reserve Districts appear to have stabilize in the first

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[2] Nonagricultural wage and salary disbursements are adjusted (+ or -) by the Bureau of Economic Analysis to account for the effects of commuting workers before their earnings are added to total estimates of personal income. The $127.3 billion in covered nonagricultural personal income is approximately 51.8% of the $245.9 billion in the Region's 1986 total personal income (Table 7).

Table 8
Employment and Earnings Covered by Unemployment Insurance for the United States, West North Central Region, and North Dakota.

1986

	Annual Average Employment P/	Total Annual Wages (in thousands)	Average Monthly Wage
U.S.	**97,454,486**	**$1,945,776,267**	**$1,664**
WNC Region	**7,022,488**	**$ 127,258,664**	**$1,510**
As a % of U.S.	7.2	6.5	90.7
North Dakota	**230,258**	**$ 3,633,353**	**$1,315**
As a % of WNC	3.3	2.9	87.1
As a % of U.S.	0.2	0.2	79.0

P/Preliminary
SOURCE: "Average Annual Pay by State and Industry, 1986," News, USDOL/BLS (news release No. USDA87-377), September 1, 1987.

quarter of 1987 and continue to show improvement through the third quarter.[3]

The second quarter of 1987 marked the first time since 1981 that the value of agricultural land had "increased or remained stable for two consecutive quarters" the Federal Reserve Bank of Kansas City observed. "Land values ... (the Bank stated) appear to be leveling out because asset values are now more in line with the cash flow that the land can generate. In addition, the costs of servicing farm debt are lower."(Financial Letter 1987a) At the same time, the Federal Reserve Bank of Minneapolis reported on their survey of rural bankers in the Ninth District, finding: "Our survey provides clear evidence that the prolonged decline in district farm income has been reversed ... Higher prices made livestock particularly strong, the mild winter ..., government subsidies ..., the Conservation Reserve Program..., (and paying) less for fuel and fertilizer" all contributed to improved farm income and with it an "end to the drastic six-year decline in farmland values." (Agricultural Credit Conditions 1987)

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[3] The Ninth Federal Reserve District includes the states of North Dakota, South Dakota, and Minnesota (one other state and parts of two others form the balance of the District). The Tenth Federal Reserve is comprised of the West North Central states of Kansas, Missouri and Nebraska (the District includes four other states outside the West North Central Region).

Improved farm income, accordingly, is expected to have important, region-wide consequences for the nonfarm labor market. "Stable or improved financial conditions on (Ninth) district farms are likely to contribute to ... growth by easing a long-standing drag on farm-related businesses in the districts nonfarm economy" according to modeling forecasts of the District prepared by the Federal Reserve Bank of Minneapolis. (District Economic Conditions 1987a:1) Based upon data available through the second quarter of 1987, the Bank forecast a nonfarm wage and salary employment growth rate of 3.3 percent for the nation, and for Minnesota a 4.1 percent growth rate, North Dakota 2.3 percent, and for South Dakota 2.1 percent from 1987 to 1988. By the end of the third quarter, prior to the stock market crash, the bank had revised its 1988 growth rates to 2.2 percent for the nation, 1.4 percent and 0.7 percent for North and South Dakota respectively, and for Minnesota, the employment growth rate was slashed to 2.4 percent. (District Economic Conditions 1987b) Although the economy of the Plains states in the Ninth Federal Reserve District is expected to show some improvement in 1988, the optimism of early 1987 has been replaced by a more sober perspective.

Other fall 1987, pre-stock market crash, projections of nonagricultural wage and salary employment growth during 1988 suggests that the Region, as a whole, would grow by 1.6 percent, in contrast to the nation's 1987-88 2.2 percent growth rate. Within that context, nonagricultural employment was forecast to grow by 2.0 percent in Minnesota, 1.8 percent in Missouri, Kansas and South Dakota, by 1.2 percent in Nebraska, and by 0.8 and 0.7 percent respectively in Iowa and North Dakota. (Data -- Wharton 1987: 3.11) With the average nonfarm wage trailing the nation's average earnings, it appears that real personal income growth in the West North Central Region would only make progress in comparison to the nation based on agriculture's performance. In summary, however, most forecasts place the Region's potential employment and earnings growth rate below the national growth rate.

IV. AGRICULTURE IN NORTH DAKOTA

The Food Security Act of 1985 established a new set of basic and complex ground rules for U.S. Agriculture. This is especially true for that sector of agriculture concerned with crop production.

The withdrawal of large shares of land in the U.S. from production, a planned five-year reduction in farm subsidies, and a substantial decrease in the number of medium-size commercial farms, means that once established knowledge of the relationships between commodity prices and the prosperity of farms and farm communities needs to be reassessed. Even in the aggregate (that is, without distinction for farm size, location, or financial condition), the anticipated increase in commodity prices, and increased export volumes, does not mean that the impact on local farm family personal consumption expenditures or expenditures for production inputs is straightforward.

The balance of the decade for agriculture is expected to be governed by:

- A restructuring of the rural community as it adjusts to population loss.
- Implementation of the 1985 Farm Bill which is expect to produce modest (nominal) increases in commodity prices and a decrease in farm input expenditures.
- Heavily subsidized exports.
- Rising international trade tensions.
- Positive, but lagged, effects of the fall of the dollar for exports.

The national market average price for a bushel of wheat is expected to rise marginally to the $2.40-$2.60 range for the marketing year beginning June 1, 1987. The mid-point of the average per bushel price for the present year, then, represents an improvement in the $2.42 nominal price received the preceding year, but is down substantially from $3.08 per bushel received during the 1985/86 marketing year. Combined with an anticipated increase in total usage (+10.6%), real cash income from the sale of wheat may hold constant over the short term. The rise in the nominal value of each bushel of wheat sold is not expected to be greater than the rate of inflation. Deflating real prices per bushel, then, and increased usage of wheat represents the general structure, or short-term model, for wheat as a national farm income source. (Data -- Agricultural Outlook 1987a:47)

But wheat, and crops in general, are far less important components in the calculation of national farm income than they are in the calculation of farm income in either the West North Central Region or North Dakota.

For the nation as a whole in 1986, wheat represented only 3.4 percent of cash farm income. On the other hand, 23.9 percent of farm production income in North Dakota resulted from the sale of wheat. Compared to the nation, North Dakota's farms are far more dependent upon crops and related subsidies than are the farms of the nation as a whole. In addition to wheat, the state's farms gained 28.9 percent of their cash income from the sale of barley, oats and other crops, 24.4 percent from the sale of livestock and related products, and 22.8 percent from government payments. For the nation as a whole, crops other than wheat were responsible for 38.3 percent of cash income from farming. Livestock and livestock products accounted for another 50.6 percent, with government payments adding 7.7 percent. Clearly, each state's income prospects need to be weighted towards the particular combination of commodities it produces. It is also evident from the differences in the distribution of commodity income, between the nation and the state, that direct farm subsidies (largely made available to farmers in the form of crop-specific price supports and land diversion payments) form a far larger component of North Dakota's income structure than is the case nationally. Consequently, federal price support policies and land diversion programs are likely to have far greater consequences for North Dakota than for the nation's farm economy as a whole.

In addition to real value deflation in the per unit market price of wheat, the Food Security Act of 1985 decreases the unit value of commodity subsidies. By the end of the decade (the 1989/90 crop year), target prices for wheat are permitted to fall by 5 percent in nominal dollars from their 1987/88 crop year level.[1] The difference between the target price and market value determines the amount of subsidy or deficiency payment made to farm operators for each bushel of commodity. In addition, the permissible amount of acreage planted to wheat is required to decrease as a condition of program participation (wheat acreage set asides are at their greatest at 20.8 million acres in 1988/89). Falling target prices and acreage set asides represent structural limitations to aggregate farm income growth.

Deficiency-based, real cash farm income from wheat is destined to stall and then falter, while the annual volume produced for marketing will be constrained by decreased plantings. In addition to decreased permissible planted acreage, falling real farm prices, and decreased target prices, another form of farm subsidy, the Commodity Credit Corporation loan, is expected to fall below a declining real market price. The decline in the loan rate will make the sale of wheat on the open market a higher probability than forfeiture of collateral wheat to the Corporation. Indeed, wheat under Corporation loan is expected to drop during the balance of the decade to less than one-third of the 678 million bushels on loan during the 1985/86 crop year when the loan rate average was above the market price. (Data -- FAPRI 1987:70)

The national forecast for the price and disposition of wheat is weighted towards the lower valued, higher yielding winter wheats which dominate national markets. Durum and other spring wheats produced in North Dakota are more highly valued, but suffer the offset of comparatively lower yields. Even though these differences have state and local importance, basic policy

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Nominal Price for Wheat:	85/86	86/87	87/88	88/89	89/90
Farm Price	$3.16	$2.40	$2.44	$2.39	$2.45
Loan Rate	$3.30	$2.40	$2.28	$2.17	$2.06
Target Price	$4.38	$4.38	$4.38	$4.29	$4.16

SOURCE: FAPRI 1987:70

structure, supply, and consumption factors can be expected to exert a common influence on farm income stemming from U.S. wheat no matter where, among the Plains states, it is produced.

One of the chief goals of the 1985 farm bill is to bolster farm income by offsetting declining per unit prices with greater export volumes. (Agricultural Outlook 1987:2) Lower market prices and export subsidies are expected to expand the volume of exports from 915 million bushes in the 1985/86 crop year to 1,356 million bushel in the 1989/90 (+48.2%) crop year. A combination of increased exports, the temporary use of wheat as a livestock feed, and reduced acreage committed to small grains as a whole, are expected to reduce supplies by the end of the decade and put upward pressure on prices. Some of these factors are influencing the outlook for wheat in the current marketing year. Partly as a consequence of export subsidies offered through the Export Enhancement Program, the Wheat Market Review announced, "...total usage of U.S. wheat this year ... (1987/88) ... is currently expected to be 16% larger and carryover stocks are expected to be cut by 24% to 1,386 mil. bu., the lowest level since 1982-83 when 1,160 mil. bu. of wheat remained at the end of the marketing year." (Wheat Market Review 11/1987)[2] However, there are factors other than export subsidies offered through the 1985 Farm Bill that will affect the volume of commodity exports, and as importantly, the timing of export movement over the remainder of the decade.

Competitors in the world wheat market, faced with a U.S. "... subsidy of up to $1.25 per bushel ... or more under ... (the) wheat Export Enhancement Program ..." are seeing prices for their own country's wheat producers fall to the point where expanded domestic subsidy programs are needed to sustain production agriculture. (World Food Trade 1987:3) In addition, expanded U.S. subsidies have forced foreign competitors, who wish to retain their trade market share, to expand their own costly export subsidy programs. The increased cost of domestic and export subsidy programs for foreign competitors has produced rising trade tensions which, it appears, are likely to increase pressures to modify U.S. export policy.

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[2] "In fiscal 1986-87, over 90 percent of U.S. wheat exports moved under some type of government export assistance program ... (including) ... Commodity Credit Corporation (CCC) loan guarantees ..." (World Food Trade 1987:37)

The value of North Dakota's agricultural exports represents an amount approximating two-thirds of cash receipts from the marketing of crops. Export income for agricultural products from North Dakota stood at $1.5 billion in Fiscal Year 1984. By Fiscal Year 1986, North Dakota's foreign exports had fallen by 33.3 percent and were valued at $1 billion. (Data -- World Food Trade 1987:44) Cash farm income from the sale of all crops is estimated at $1.623 billion in 1986. (Data -- calendar year basis, BEA 11/87) Under conditions of falling real prices for wheat and declining subsidies, the failure of export markets to expand volume at a substantial pace between now and the end of the decade will mean that cash farm income in North Dakota will falter.

The low price of wheat contributed to the expansion of its use as a livestock feed during the recently completed crop year (1986/87). But the future use of wheat for feed purposes is expected to drop at the same time that cattle prices recede from their 1986II-1988IV rally. Because non-feed domestic consumption expands slowly, the drop in wheat usage as a feed will mean that total domestic consumption will trend downward over the balance of the decade. A downward trend in domestic consumption and slight increases in production, due to increases in average yield, means that the only method of positively affecting price-depressing carryover stocks lies in the export market.

The destination of wheat exports has changed during the past ten years. For the ten-year period ending with fiscal 1986, U.S. wheat exports to lesser developed countries expanded from 63.4 percent to 77.2 percent of total exports. Over the same period, shipments to the USSR decreased from 10.1 percent to 0.6 percent, and the European Community dropped as a destination from 11.3 to 4.9 percent of total wheat exports.

The most populous countries in the world, China and India, have expanded grain production during this decade and are presently net exporters of agricultural commodities. But other, less developed nations and certain recently industrialized countries have not reached this point. These countries represent the greatest potential source of increased exports. However, the extent to which export increases to these countries occur depends upon their domestic growth, and the time lag required for the currencies of these countries to respond to the decreasing value of the dollar.

Recent analysis indicates that the fall of the dollar, weighted in terms of currencies used by our historic trading partners, no longer reflects the changing pattern in the destination of agricultural exports. "A weak world economy, mounting competition from other exporting countries, and the strength of the dollar are the principal causes of the decline ..." in U.S. exports in the 1980s. (Henneberry, et al. 1987:23) The fall of the dollar since 1985, then, represents the removal of a substantial barrier to U.S. exports.

However, there are indications that while the dollar has fallen substantially against such currencies as the Japanese yen and German mark, it remains quite strong against " ... the currencies of countries that import different types of U.S. farm products. From the 1979-80 marketing year to the peak in 1985-86, the dollar appreciated 58 percent against the currencies that import U.S. wheat ... (In addition) the dollar has been particularly strong against the currencies of agricultural competitors. From the 1979-80 marketing year to the 1984-85 marketing year, the dollar rose 46 percent in real terms against the currencies of major wheat exporters."[3] (Henneberry, et al. 1987:28)

As the dollar falls, analysis suggests, it does so haltingly against the currencies of wheat importing nations because these nations have limited flexibility in their exchange rate schedules, requiring frequent government intervention, or have "... pegged or fixed regimes, which allow no fluctuation and, therefore, are not responsive to short-run market forces." (Henneberry, et al. 1987:29) Further analysis suggests that "wheat sales are becoming more concentrated in countries with fixed regimes while corn and soybean foreign sales are becoming more concentrated in floating regime countries." In effect, wheat exports may lag behind the expansion of export sales for merchandise, and agricultural commodities produced by other states in the West North Central Region. Moreover, wheat importing countries will need to take the initiative to alter exchange rates before the benefits of a falling dollar become apparent.

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[3] Agricultural marketing years, October 1 to September 30.

Finally, the economic growth rate of many wheat importing countries rises and falls depending upon oil prices. An estimated 24 percent of the countries which import wheat partially finance those purchases with the sale of exported oil. "About 15 percent of U.S. wheat exports were shipped (in 1985-86) to oil exporters in the Mideast and North Africa, 4 percent to Western Hemisphere oil exporters, and 5 percent to other non-Soviet oil exporting nations."(World Food Trade 1987:60) Low world oil prices serves to limit wheat imports by these nations.

On the other hand, the economies of oil importing developed nations, such as Japan, and the economic growth potential of recently industrialized, and developing nations are enhanced by low oil prices. During the 1985-86 marketing year, 76 percent of wheat exports went to countries which require foreign exchange to purchase both petroleum and wheat. Rapid escalation in petroleum prices for these wheat importing countries tends to impair their economic growth and channel resources to petroleum purchases.

Additionally, nations which traditionally compete in international wheat markets may, over time, begin to consume more of what they produce as their own economies expand: "In Brazil and Argentina, reduced energy costs, if they are maintained near mid-1987 levels, may help accelerate domestic economic growth, increasing domestic demand for farm products and tending to reduce export availabilities...However, a time lag of at least two or three years may be needed..." (World Food Trade 1987:59) In addition to influencing the cost of U.S. farm inputs, low petroleum prices have a complex effect on U.S. wheat sales in international markets and domestic wheat consumption by competing nations.

A considerable time lag may be required before less developed and newly developing countries can take advantage of lower wheat prices and changes in the value of the dollar. Therefore, the volume of exports may not rise quickly enough to have the desired drawdown effect on U.S. carryover, pushing a muted commodity price increase to the end of the decade. Indeed, over the same period that target prices and loan rates are expected to decline, the farm price value of total U.S. export and domestic demand is expected to decline even as export volumes increase. The farm price value of export and domestic demand is higher during the 85/86 marketing year at $6,194 billion ($3.16 per bu. X 1,960 million bu.) than it is forecast to be under an expanded projection of exports during the 1989/90 marketing year ($2.45 per bu. X 2,387 million bu. of domestic and export demand = $5,848 billion). (Data -- FAPRI 1987:70) With exceptions stemming from better than average yields, or an increased short run demand for specialty or high protein wheats, the prospects for real aggregate cash income increases from wheat during the balance of the decade appear to be remote.

While it appears that income from the sale of wheat is more likely to increase at the end of the decade, increased beef prices and reduced feed costs are expected to sustain agriculture, at least on a substate regional basis, through the end of 1988. During 1986II, feeder steers in Fargo were priced at $67.66 per hundred weight; by 1987II they were priced at $84.52. By the fourth quarter of 1988, prices are expected to fall to $78.00 due, in part, to increased competition from poultry and pork production. (Data -- 1988 Ag Outlook) In 1986, cash farm income from the sale of cattle and calves was responsible for 17.4 percent of all cash farm income from the sale of crops, livestock, and farm subsidies. The positive impact of increased beef prices is comparatively small and tends to be more localized than are the effects of crop production, price, and subsidy.

For many farmers, 1987 represented an opportunity for increased income from livestock. More broadly, however, "... crop farmers have benefited from unprecedented government program payments." (Ag Outlook 1988) However, income improvements during 1987 have not been translated directly into either increased personal consumption expenditures by farm families or increased purchases of farm inputs. Rather, "as a response to improved earnings and liquidity, farmers are using these profits to reduce their outstanding debt." (Ag Outlook 1988) The 1987 turnaround in farm income, it appears, may not have immediate impacts on local economies because the crisis in farming has cumulative, lagged, and secondary effects which limit spending and channel the migration of employment opportunities and population away from rural communities.

The 1987 turnaround in farm income follows on the heels of a "cash receipt from farm marketings" decline of 14.1 percent from 1985 to 1986, and an anticipated slow growth rate in income for the balance of the decade. Offsetting the 1986 decrease in aggregate farm marketings income was a 44.8 percent growth, to $700.2 million, in direct commodity subsidies which brought realized net, or post production expense, income to $764.8 million. (Data -- Bureau of Economic Analysis microfiche 11/87) Because farm prices are expected to remain low over the balance of the decade, and subsidies are scheduled to fall, realized net income may not grow in real terms over the balance of the decade.

A lack of substantial growth in realized net income suggests that the total amount of farm income available (in the absence of, for example, off-farm wage and salary employment) for farm family personal consumption expenditure is also unlikely to show growth.

In terms of purchases stemming from the need to finance the production process, the $2.5 billion in farm production expenditures during 1986 (representing a dollar amount approximately 3.2 times greater than realized net income) was the least amount spent on production since the drought of 1980. Although the 1985 Farm Bill retains the incentive to boost average yield through the use of additional fertilizer and pesticide applications, the scale of land set asides, especially in the 1988/89 crop year, and the number of acres set aside in the Conservation Reserve Program, will limit real value increases in production input spending over the balance of the decade.[4]

Receding profitability, and the associated decline in land values since 1981, have created the conditions where land purchase risk for certain farm operations without debt is minimal. However, there is an additional question with respect to the extent to which the 1985 Farm Bill encourages the acquisition of land and supports a temporary stability in its price. There are indications that land prices (and rent) have stabilized in both North Dakota and the Plains region as a whole. But land purchases would appear to be practical only within the context of large, debt-free farm and ranch operations. Securing adjacent land, to distribute the capital costs of operation across larger tracts, permits larger farming operations to better absorb the impact of falling commodity prices and greater set aside requirements. Falling land prices have created the opportunity to purchase land, while at the same time, farm policy creates the incentive to acquire land as a means of reducing vulnerability to declining subsidy rates and commodity prices.

And farms continue to increase in size while diminishing in

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[4] By the late summer of 1987, 1.4 million acres of erodible land in North Dakota had been tentatively set aside under the Conservation Reserve Program with a potential for 5.2 million acres eligible. In some counties up to 25 percent of all crop land is eligible. "N.D. Participation in CRP Signup is 'Tip of Iceberg'" Fargo Forum 8/27/87

Table 9
Summary Data From the 1982 Census of Agriculture

Farm Characteristics	1978	1982	Change	
			N	%
TOTAL	40,357	36,436	-3,921	-9.7
BY SIZE (acres):				
1-9	1,048	1,121	73	7.0
10-49	902	1,142	240	26.6
50-179	3,564	3,179	-385	-10.8
180-499	7,901	6,577	-1,324	-16.8
500-999	11,774	9,756	-2,018	-17.1
1,000-1,999	11,133	10,045	-1,088	-9.8
2,000≥	4,035	4,616	581	14.4

Farm Operator Characteristics	1978	1982	Change	
			N	%
TOTAL	40,357	36,436	-3,921	-9.7
BY AGE:				
≤ 24	2,111	1,974	-137	-6.5
25-34	6,627	6,845	218	3.3
35-44	7,056	6,776	-280	-4.0
45-54	9,900	7,859	-2,041	-20.6
55-64	10,107	8,594	-1,513	-15.0
65≥	4,556	4,388	-168	-3.7
BY PRINCIPAL OCCUPATION AND RESIDENCE:				
Occupation: Farming	34,086	30,594	-3,492	-10.2
Residence on Farm Operated	25,210	22,691	-2,519	-10.0
Residence Not on Farm Operated	5,289	4,640	-649	-12.3
Occupation: Nonfarming	6,271	5,842	-429	-6.8
Residence on Farm Operated	2,857	2,603	-254	-8.9
Residence Not on Farm Operated	2,605	2,533	-72	-2.8
BY DAYS OF OFF FARM WORK:				
None	25,287	23,375	-1,912	-7.6
1-99	7,157	5,771	-1,386	-19.4
100≥	7,913	7,290	-623	-7.9

SOURCE: Bureau of the Census, "1982 Census of Agriculture; North Dakota" (Preliminary Report) AC82-A-000(p), March 1984.

number.[5] Between 1978 and 1986, the number of farms dropped from 41,000 to 33,000 (-19.5%). Over the same period, the average farm/ranch size grew by 21.2 percent to 1,232 acres. (Data--Agricultural Statistics 1987:12) However, these aggregated data tend to mask the scale of change affecting medium-size commercial farms. The Census of Agriculture for 1978 and 1982 (see Table 9) reveals a net loss over the four-year period of 3,921 farms (-9.7%). But, for farm and ranch operations of between 50 and 1,999 acres, there was a gross decrease of 4,815 farms with the greatest rate of loss (-17.1%) among farms in the 500 to 999 acre size class. If the rate of change, from 1978 to 1982, for each farm size class is repeated in proportion to the total amount of decrease for the 1982 to 1986 period, an additional loss in the number of farms of 50 to 1,999 acres can be estimated at 4,220 farms. In other words, as many as 9,035 farms of between 50 and 1,999 acres (with an estimated 42.0% of those between 500-999 acres) may have ceased operation as independent farms and ranches over the eight-year period ending in 1986. These 9,035 farms represent slightly more than a quarter (-26.3) of the 50 to 1,999 acre farms identified by the 1978 Census of Agriculture.

With many farm operators holding off-farm residence, able to obtain off-farm employment in local communities, or near retirement age, it is not clear how extensively farm loss is related to out-migration. Perhaps the best concrete indicator of county-level migration is found in the Department of Public Instruction's head count enrollment data. These data are discussed in Chapter VIII. Briefly, enrollment data can be interpreted as suggesting that some rural counties have experienced enrollment decreases four to five times greater than the state average. At the same time, several urbanized counties have demonstrated only moderate decline or enrollment growth. These changes in the data can be used to suggest that out-migration has indeed been associated with the decrease in medium-size farm numbers and that the decrease is not evenly spread across the state.

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[5] One indication of continued stress in agriculture is found in the results of the state's Credit Review Board foreclosure survey. Foreclosures from December through October 1987 were carried out on 127 parcels of land which averaged 595.4 acres each. For the same period in 1986, 125 parcels averaging 788.3 acres had been foreclosed. For the first nine months of 1987, 410 parcels, averaging 487.2 acres, had been voluntarily conveyed to lenders. During the same period in 1986, only 226 parcels averaging 508 acres changed ownership through voluntary conveyance.

Regardless of the near-term positive prospects for income from livestock, and the decade-end forecast of increased nominal wheat prices, there are substantially fewer farm families to transform realized net income into personal consumption expenditures than there were just a few years ago. Even though the decrease in the number of farm/ranch operators can be estimated, the secondary and lagged consequences of these farm losses are less easily assessed. Farm families with real constant, or gradually growing personal income, can quickly find their needs for retail and primary personal care services met in rural communities. Local business volume, then, must decline as fewer families remain on the farm, putting further stress on the viability of rural businesses and more urbanized wholesalers who support them. As businesses less able to tolerate the loss of customers succumb, the balance of the firms in the community are faced with the growing need to cover their own fixed costs as well as those associated with public investment. These pressures act as a further constraint to employment, limiting wage and salary earnings opportunities for remaining farm family members. Meanwhile, the out-migration of the young serves to reduce the total amount of state grants to local schools for education, often forcing the choice between higher local taxes or school consolidation.

Some secondary consequences of farm failure have longer lag periods. Substate tax distribution formulas, for example, based upon decennial census population counts will undoubtedly serve to reduce the flow of tax dollars to rural areas after the 1990 census data are published. In summary, then, even though agricultural property values appear to have stabilized in 1987, there is little direct evidence supporting the idea that the problem of low commodity-based incomes has resolved itself, or that the full consequences of the loss of farm families during the current crisis has been felt.

V. WAGE AND SALARY EMPLOYMENT

The cumulative effects of out-migration, rural to urban migration, the maturing of the baby boom generation, loss of assets in agriculture, extended deterioration of the domestic petroleum industry, and the completion of large capital-intensive construction projects, represent trends and events which forced major subsequent restructuring across several industries between 1984 and 1986.

Mid-decade was also a period when federal policy changes shaped North Dakota's labor market. Several industries, such as transportation, were given the opportunity under deregulation to employ new technologies and adopt new forms of business organization. Other regulated industries, private and quasi-public financial institutions, were also changing their legal dimensions, affecting the number of employees needed by the industry as well as the communities they worked in. At the same time, the health care industry's employment practices were being influenced by changes in federal regulation.

Most of the dramatic steps in industrial restructuring, whether due to changes in regulatory policy, demographics, or for economic reasons, appear to have been largely completed by the winter of 1986/87.

The first third of the decade, for certain purposes, can be thought of as a period of boom (running counter to two national recessions) in wage and salary employment. The middle years of the decade represented a "bust" in both agriculture and the wage and salary labor market. Economic change during the latter third of the decade appears likely to be slower in comparison to either previous period, and to be carried forward through forms of industrial organization not present during the first part of the decade.

The two following chapters, one devoted to a discussion of the nonfarm goods-producing industries of mining, manufacturing, and construction, and the other, discussing services-producing industries, focus on industry-level detail. This chapter, on the other hand, focuses on identifying associated elements of job holding which are expected to mark the trends in labor market conditions over the last third of the decade.

Six trends are expected to define the dynamics of North Dakota's labor market during 1988 and 1989:

- Nonfarm wage and salary employment growth will be slow, averaging between 0.6 and 0.7 percent.
- Job openings due to replacement need will be 4 to 5 times greater than those due to growth.
- Mid-decade was marked by a period of industrial restructuring, changes in firm size, and changes in the characteristics of jobs.
- Nonfarm wage and salary earnings have failed to keep pace with the rate of inflation for more than three years.
- The number of new nonfarm employment opportunities have not been sufficient to offset employment loss in agriculture.
- Employment in urban areas is growing while jobs are lost in rural areas enhancing the probability of population migration.

Wage and salary employment dropped during 1986 by 0.9 percent. Current employment survey statistics indicate that 2,200 jobs were lost during that year. Even though the net number of jobs may change slightly or decrease, the need for new employees takes place in most industries continually. Mortality, retirement, withdrawal from the labor market for child rearing purposes, or to care for a member of the family in ill health, creates replacement job openings in all industries. One estimate indicates that annually, on average, as many as 10,000 job openings are created in North Dakota due to replacement need.(Broschat 1985) In addition, industrial restructuring has been accompanied by substantial job growth in the services-producing sector.

Replacement, new job growth opportunity, and job turnover vacancy needs are often met through Job Service placement activity (see Table 10). During the program year which ended June 30, 1987, 26,803 individuals were placed in 34,070 permanent and temporary jobs. Most job placements (16,231 or 47.6%) were made in the growing services industry, in trade (7,249 or 21.3%) and government (7,811 or 22.9%). But even the declining construction industry encountered the need for additional labor (accounting for 9.4%, n=3,213 of all placements). Although labor markets may appear to be undergoing little change, underlying dynamics can present another picture.

Industry restructuring (discussed in the succeeding two chapters) has been associated with changes in firm size, and the dimensions of jobs. As firms change size, so, too, do their staffing patterns. Occupational staffing patterns for each major industry in North Dakota are summarized in appendix Table 9. As industries, such as construction, contract on a seasonal basis, employment is shed along occupation-specific channels (e.g. laborers are laid off while managerial staff are retained). But when industry employment declines on a trend basis, a greater variety of occupations are affected.

Evaluation by analysts conducting community employment surveys indicates that one response to the job loss associated with completion of heavy construction projects has been the start-up of small construction firms aimed at the home repair/remodeling and other low capital construction markets.

Average firm size appears to be changing for reasons peculiar to certain industries and geographic areas. There have been several suggestions, for example, that many dislocated farm/ranch operators (individuals with a stake in rural areas and an incentive to remain) have turned their skills and knowledge to the establishment of small firms in the trucking industry. It appears that centralization of the grain handling industry (in addition to increasing mainline transportation industry productivity, reducing its employment seasonality, and adding new technology) not only adds to profitability through branch line abandonment, but also creates the opportunity for other, more marginal, methods of transportation to meet rural needs.

TABLE 10

TABLE 10 - ALL JOB OPENINGS 06/30/87 NORTH DAKOTA
OPENINGS RECEIVED AND FILLED BY INDUSTRIAL DIVISION AND OCCUPATIONAL CATEGORY

ITEM NO	OCCUPATIONAL CATEGORIES AND DIVISIONS		TOTAL	AGRICULTURE, FOREST, FISHERY	MINING	CONSTR	MFG	TRANSP & UTIL	WHS & RETAIL TRADE	FINANCE, INS & REAL ESTATE	SERVICES	PUBLIC ADMINISTRATION	GOVT
A	B		C	D	E	F	G	H	I	J	K	L	M
	OPENINGS RECEIVED												
10010	TOTAL		42685	2278	251	3451	2696	1664	9956	1196	19235	1276	3526
10015	0-1	PROF TECH MGR	6899	10	16	126	316	54	521	166	3421	272	2766
10020	20-24	CLERICAL	8308	25	15	195	322	284	1691	720	4594	443	3346
10025	25-29	SALES	2893	8	2	57	41	130	2097	85	443	20	69
10030	30	DOMESTIC	2857	19	0	6	8	3	82	20	2712	7	123
10035	31-39	OTHER SERVICES	8030	7	11	147	86	51	3218	63	4223	229	1462
10040	4	FARM F & F	2533	1789	1	24	8	24	136	11	427	143	472
10045	5	PROCESSING	508	77	0	16	297	6	65	6	19	1	3
10050	6	MACHINE TRADES	775	5	7	85	201	33	267	2	154	21	47
10055	7	BENCH WORK	726	1	0	14	525	4	75	2	98	0	14
10060	8	STRUCTURAL	3853	15	37	2466	253	118	282	48	533	69	268
10065	90-91	MOTOR FRGT, TRANSP	1568	130	31	165	55	557	436	3	174	7	41
10070	92	PKG MTRL HNDL	5267	191	20	505	495	647	1965	71	2251	41	241
10075	93-97	OTHER	466	1	121	45	43	6	59	4	171	16	29
	OPENINGS FILLED												
10085	TOTAL		34070	1835	176	3213	2191	1473	7263	801	16231	669	7311
10090	0-1	PROF TECH MGR	3766	5	17	40	199	23	373	27	2359	117	2411
10095	20-24	CLERICAL	6698	19	10	143	242	212	1259	479	4011	331	3108
10100	25-29	SALES	1896	2	1	25	48	34	1352	53	330	15	40
10105	30	DOMESTIC	2335	15	0	6	8	3	77	13	2201	7	36
10110	31-39	OTHER SERVICES	6132	7	8	130	63	36	2382	35	3312	159	1235
10115	4	FARM F & F	2102	1438	1	10	6	18	90	9	397	132	451
10120	5	PROCESSING	454	71	0	18	282	6	57	3	13	3	1
10125	6	MACHINE TRADES	507	5	2	68	146	20	154	1	133	11	30
10130	7	BENCH WORK	581	0	0	6	436	2	37	2	96	2	32
10135	8	STRUCTURAL	3157	13	28	2083	223	88	215	37	414	49	186
10140	90-91	MOTOR FRGT, TRANSP	1086	83	21	127	60	344	295	3	131	6	23
10145	92	PKG MTRL HNDL	4968	174	18	472	457	624	925	69	2215	33	228
10150	93-97	OTHER	368	1	70	45	31	3	36	3	150	9	19

FOR PERIOD ENDING 06/30/87

Based on a review of community employment survey data, it appears that diminishing firm size is more prevalent in western than in eastern North Dakota. Employment in eastern North Dakota has seen steadier advances than in western North Dakota. Because many new business start-ups are believed to stem from a lack of employment opportunities and attachment to a particular locality, new employment opportunities in eastern North Dakota remove the incentive to start a small construction or trucking enterprise.

Changes in firm size influence occupational staffing patterns and are associated with differences in wage and salary earnings. In addition, size and occupational complexity are factors influencing the kinds of relationships firms can establish with other firms in order to become involved in larger undertakings.

The restructuring of industry and changes in firm size have also been associated with changes in the attributes or dimensions of jobs. There have been several suggestions of trends towards part-time employment on the national level. Based on Job Service's primary data, it is not yet clear whether or not the incidence of part-time employment in the aggregate is increasing.

The data in Table 12 displays community employment survey-based information on full- and part-time employment in 1986. The collection of data over several years will be needed to determine whether or not the incidence of part-time employment is increasing independently of each industry. In the meantime, it is apparent that industries with large components of part-time jobs are growing faster than are industries dominated by full-time job opportunities. Manufacturing, with 11.3 percent of its jobs part-time, has the greatest share of part-time employment among goods-producing industries. Other industries, in the services-producing sector, have shown net growth in 1987 and are comprised either chiefly, as in the retail trade industry (51.2 %), or substantially, as in the services industry (39.8%), of part-time jobs.

Trends in earnings rates also suggest that job growth in certain industries has resulted largely from the division of an expanding number of employment opportunities into a relatively constant amount of earnings. Average monthly Job Insurance covered earnings (an amount corresponding to gross pay prior to deductions) in the retail trade industry increased in value by 0.8 percent from 1984 to 1985 (inflation grew 4.5 times faster) while employment grew by 1.2 percent.[1] Tracing average earnings growth, as it relates to particular occupations and staffing patterns, also requires expanding the historic base of wage information summarized in Table 11.

Industry configuration, the dimensions of firms, and the character of jobs are in transition. As the characteristics of jobs have changed, so, too, have the characteristics of job holders. Workers are now more likely than at any other time in history to be female, found in larger communities and urban centers, and mature. Many of these labor force trends are discussed in the final chapter of this report.

From 1985 to 1986, total Job Insurance covered wage and salary personal income grew by just over $6 million (+0.2%), limiting the amount of earnings to a growth rate substantially below the rate of inflation (see Table 4, the inflation rate was 1.9% in 1986).[2] Total covered earnings began growing in the

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[1] In 1986, there were an annual average 230,388 jobs covered by unemployment insurance. These data are drawn from quarterly employer tax filings and are used to assess the accuracy of current employment statistical estimates. Current employment estimates are based on a sample of approximately 12 percent of the state's employers. These monthly surveys reveal that total wage and salary employment (a count of the number of jobs worked) stood at 249,900 during 1986. The difference between the two types of employment exists because approximately 10,000 local and elected government officials (many of whom hold other full- or part-time covered jobs) are not covered in their capacity as government employees. Independent insurance agents, church employees, the military, employees of certain nonprofit organizations, and railroad employees also do not have their job related incomes covered by state insurance programs.

[2] Two federal programs injected more money into the state during 1986 than total covered earnings. Medicare/Medicaid vendor payments increased by $77.9 million (+23.0%) and direct

Table 11
Wage Summary by Occupation;
1986 City Average for North Dakota

Position	* No.	Average Hourly Wage
Accountant I	28	$ 8.40
Accountant II	46	10.44
Accountant III	45	13.35
Administrative Assistant	109	9.20
Auto Body Repairer	33	8.43
Automobile Mechanic	184	8.18
Automobile Service Mechanic	64	6.31
Bagger	70	3.92
Baker	20	6.62
Baker, Helper	29	5.27
Bartender	95	4.55
Boiler Operator	54	10.95
Bookkeeper	321	6.53
Bookkeeper Assistant	59	5.48
Bookkeeping-Machine Operator	28	6.04
Buyer	52	8.85
Carpenter, Construction	161	8.81
Cashier	153	5.19
Cashier-Checker	294	4.56
Cashier-Host/Hostess	70	4.38
Cement Finisher	23	7.74
Civil Engineer	48	15.32
Cleaner, Housekeeping	306	4.81
Clerk, Accounting	112	7.24
Clerk, Credit	31	6.37
Clerk, Desk	31	4.41
Clerk, General	189	5.58
Clerk, General Office	423	6.26
Clerk, Insurance	42	6.12
Clerk, Parts	66	6.45
Clerk, Sales	511	4.55
Clerk, Shipping and Receiving	87	8.19
Clerk, Stock	177	4.95
Clerk-Typist	121	5.96
Collector	35	7.80
Computer Operator	96	$ 7.03
Computer Programmer	32	11.72
Construction Foreman	114	11.15
Construction Worker	201	9.54
Cook, Dinner	137	5.06
Cook, Helper	165	4.58
Cook, Institutional	119	6.11
Cook, Short Order	185	4.00
Counselor	268	11.06
Counter Attendant	276	4.34
Deliverer, Merchandise	46	4.08
Dental Assistant	35	6.19
Dental Hygienist	18	10.40
Derrick Hand	18	9.14
Diesel Mechanic	222	11.06
Dishwasher/Kitchen Helper	369	4.49
Dispatcher	71	7.60
Drafter	41	9.47
Driver, Sales Route	57	8.06
Electrician Helper	36	9.05
Electrician, Journeyman	140	12.39
Electronics Technician	102	11.53
Engineering Technician	117	10.13
Estimator	35	11.44
Floor Hand	45	9.20
Gambling Dealer	41	4.73
Heating and Air Conditioning Mechanic	33	11.36
Heavy Equipment Operator	313	11.11
Janitor	455	6.09
Keypunch/Data Input Operator	66	6.38
Land Surveyor	27	10.71
Laundry Worker	89	5.26
Light Equipment Operator	130	8.59
Loan Officer	135	12.41

Table 11 (Continued)

Position	* No.	Average Hourly Wage
Machinist/Lathe Operator	70	$ 9.44
Maintenance Mechanic	98	10.93
Maintenance Person, Building	159	7.73
Manager, Credit and Collection	39	11.20
Manager, Customer Services	37	9.18
Manager, Department	419	12.29
Manager, Food Service	65	7.77
Manager, Personnel	44	12.25
Manager, Office (Clerical)	113	8.68
Manager, Office (Professional)	123	14.04
Manager, Retail	106	9.51
Manager, Sales	119	12.77
Manager, Trainee	58	6.89
Manager, Warehouse	33	11.06
Manager, Wholesale	45	12.89
Meat Cutter	60	7.53
Mechanical Engineer	19	15.66
Medical Laboratory Technician	46	8.38
Medical Technologist	34	10.59
Nurse Aid	836	5.69
Nurse, Licensed Practical	409	7.56
Nurse, Registered	512	10.03
Oil Pipe Inspector	23	7.59
Painter, Brush	24	8.86
Painter, Spray	29	8.82
Pharmacist	25	12.58
Planner	46	12.85
Plumber, Journeyman	65	12.67
Punch Press Operator	25	7.54
Purchasing Agent	26	10.28
Radiologic Technologist	33	9.01
Receptionist	122	5.33
Recreation Leader	33	7.95
Roofer	19	$ 7.11
Roofer Helper	25	5.54
Roustabout	32	7.89
Sales Representative	237	9.51
Sales Representative, Oil Field	30	13.20
Salesperson	325	7.53
Secretary	477	6.37
Secretary, Administrative	135	7.57
Secretary, Legal	107	7.41
Secretary, Medical	44	6.40
Security Guard	39	5.75
Service Station Attendant	60	4.58
Service Unit Operator	30	7.87
Sheet Metal Worker	44	9.48
Shop Supervisor	97	11.45
Swamper	30	6.89
Switchboard Operator	71	5.73
Teacher Aide	282	5.08
Teller	235	5.64
Truck Driver, Heavy	182	8.05
Truck Driver, Light	116	6.43
Truck Driver, Tractor-Trailer	202	8.48
Waiter/Waitress, Cocktail	93	3.70
Waiter/Waitress, Dining Room	450	3.40
Warehouse Worker	149	7.22
Welder, Combination	81	12.71
Welder. Wire Feed	54	9.27
Wireline Operator	21	9.45
Word Processing Operator	31	6.02
TOTAL, ALL OCCUPATIONS	**16,707**	**7.42**

* Total number of employees reported for each occupation.

SOURCE: Data--"Wage and Benefit Surveys." These surveys were conducted by Job Service during 1986 in each of the following communities: Devils Lake, Dickinson, Jamestown, Minot, Valley City, Williston, and Mercer County. Hourly average wages from these surveys were combined to produce a North Dakota urban average.

Table 12
Part-Time* Employment by Industry; 1986 City Average for North Dakota

Industry	Both Sexes				Male				Female			
	Total		Part Time		Total		Part Time		Total		Part Time	
	N	Column %	N	Row %	N	Column %	N	Row %	N	Column %	N	Row %
Mining	885	0.9	37	4.2	820	1.7	31	3.8	65	0.1	6	9.2
Construction	4,438	4.7	446	10.1	4,064	8.2	356	8.8	374	0.8	90	24.1
Manufacturing	6,200	6.5	702	11.3	4,725	9.6	402	8.5	1,475	3.2	300	20.3
Transportation, Communications & Public Utilities	6,672	7.0	821	12.3	5,150	10.4	509	9.9	1,522	3.3	312	20.5
Wholesale Trade	7,811	8.2	939	12.0	6,033	12.2	570	9.4	1,778	3.9	369	20.8
Retail Trade	20,430	21.4	10,458	51.2	9,314	18.9	3,635	39.0	11,116	24.1	6,823	61.4
Finance, Insurance, & Real Estate	5,764	6.0	966	16.8	1,972	4.0	240	12.2	3,792	8.2	726	19.1
Services	25,424	26.7	10,123	39.8	7,654	15.5	2,218	29.0	17,770	38.6	7,905	44.5
Government	17,757	18.6	3,861	21.7	9,581	19.4	1,696	17.7	8,176	17.7	2,165	26.5
Total	**95,381**	**100.0**	**28,353**	**29.7**	**49,313**	**99.9**	**9,657**	**19.6**	**46,068**	**99.9**	**18,696**	**40.6**
Row Percent		100.0				51.7				48.3		

*Part-time employment refers to individuals working less than 30 hours per week.

Source: Data are the sum of "Community Employment Surveys." A census of employers was conducted by Job Service during 1986 in each of the following communities: Minot (April); Dickinson (May); Beulah-Hazen (June); Devils Lake (July); Fargo, West Fargo, Riverside (July); Jamestown (September); and Valley City (October).

first and second quarters of 1987 (see appendix Table 27). But, as outlined in Figure 3, the inflation rate also increased and real earnings continued to lag.

Job Insurance covered wage and salary earnings have failed to grow at a rate above inflation for thirteen quarters beginning in 1984II. Earnings growth below the rate of inflation serves to suppress consumption and adds to the incentive for households to increase the labor market attachment (hours worked, tenure on the job, addition of a second or third job) of an increasing number of their members in order to maintain a constant real level of consumption potential.

Even though total wage and salary earnings have failed to keep pace with the rate of inflation for more than three years, certain industries have been able to sustain a higher rate of growth. In 1985 (according to data presented in appendix Table 24), average monthly earnings growth rates in mining, manufacturing, finance, and government exceeded the 3.6 percent growth rate of the Consumer Price Index. During 1986, earnings in the finance industry, mining, and government once again exceeded the inflation rate (1.9%), while earnings in the small component of Job Insurance covered employment in agriculture also showed growth above the rate of inflation. Even though total wage and salary earnings have failed to keep pace with the rate of inflation, average earnings in selected industries have sustained real wage rate increases.

In 1979, over three-quarters (75.7%) of the state's households relied upon wage and salary income for more than two-thirds (66.9%) of their total personal income.[3] Average wage and

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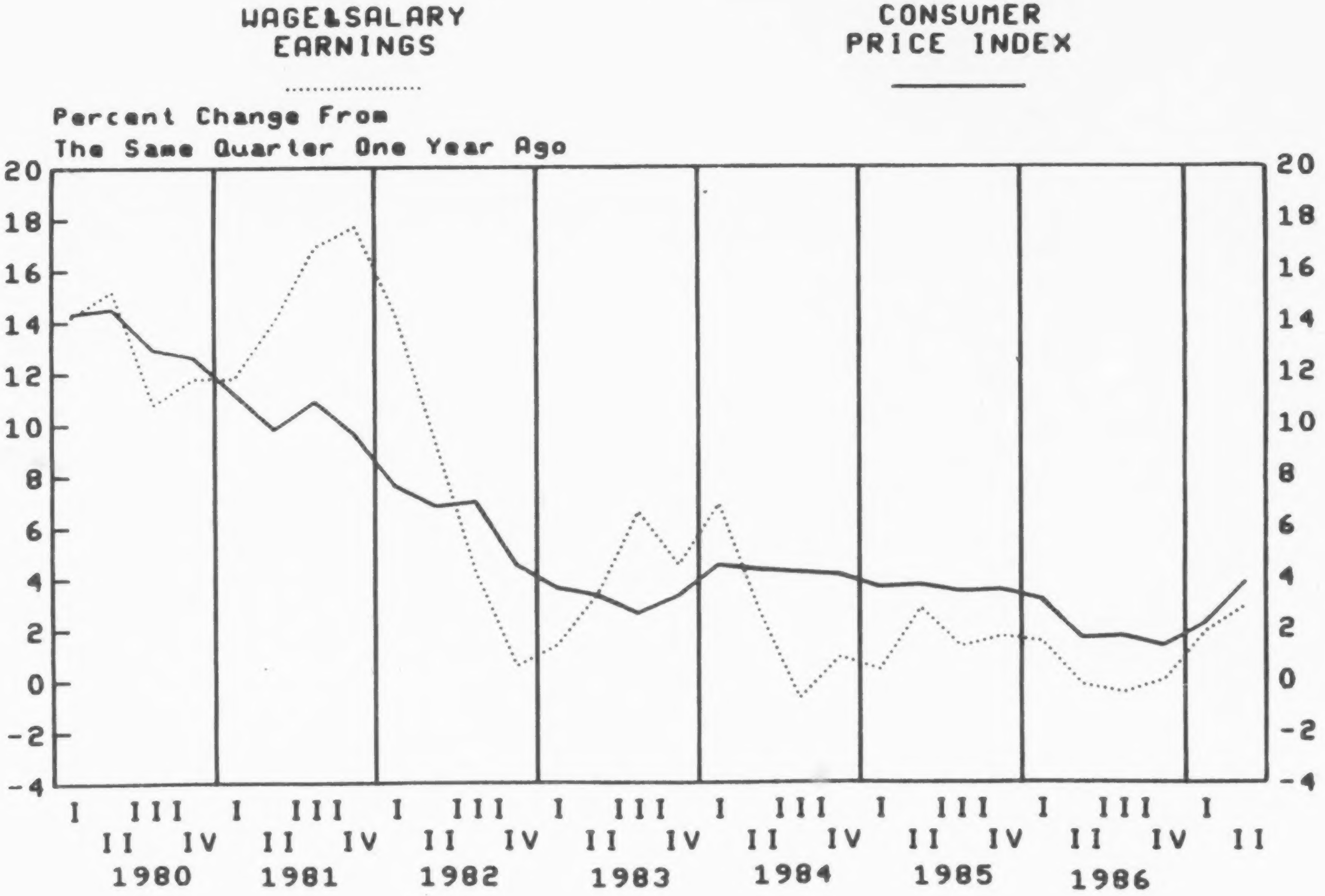
farm subsidies increased by $226.5 million (+44.8%). This helps explain why certain segments of the economy expand even though real earnings attached to most jobs fades. (Data -- Bureau of Economic Analysis, Table SA35, 8/87, and Farm Reporter, ND Agricultural Statistics Service, Issue 13-87., 9/4/87.)

[3] Total wage and salary earnings ($2.749 billion) presented in Table 13 are slightly greater than the amount ($2.417 billion) presented in appendix Table 27, in part, because the Census Bureau includes more classifications of employment-

FIGURE 1

Job Insurance Covered Wage and Salary Earnings for North Dakota and the Consumer Price Index, Percent Change From One Year Ago



salary household income in urban settings, according to the data presented in Table 13, at $18,030, was 36.7 percent greater than average wage and salary earnings in rural areas. Over four-fifths (81.0 %) of urban households had wage and salary income in 1979. In contrast, only 67.0 percent of rural households had wage and salary income. And wage and salary income, when it was earned by the members of a household, averaged far less in rural than in urban areas.

A greater proportion of rural households were dependent upon farm self-employment (33.8% of all rural households), nonfarm self-employment (12.7% in rural areas as compared to 9.4% in urban areas), and upon social security earnings (31.3% in rural as opposed to 22.1% of the households in urban settings). Because the weight of wage and salary earnings is found primarily in urban areas, changes in earnings rates are more likely to have a more visible impact in urban settings. Changes in social security and self-employment opportunities, on the other hand, involve a greater share of rural households. Residence, whether rural or urban, and the industries employing a household's members have a strong impact on household real earnings.

The forecast of employment growth in Table 14, suggests that over the short term, wage and salary employment growth is most likely to be found in industries which have failed to show sustained earnings growth rates greater than the rate of inflation. Although industry employment growth rates are expected to show employment increases towards the end of the decade in higher earnings, goods-producing industries, the earlier forecast period (1988) envisions growth rates in industries in the services-producing sector. (As is discussed in Chapter VII, earnings in the services-producing sector are distributed among occupations quite differently than in the goods-producing sector. Differences in staffing patterns and

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see footnote 1. Census Bureau reports are also residence-adjusted while covered employment and earnings are not. Other differences are attributable to self-reporting by Census respondents as opposed to employer reporting for Job Insurance purposes.

Table 13
Income by Type in 1979 for Rural and Urban* Portions of North Dakota

	All Households					Urban Households					Rural Households				
	Households With Income of Specified Type		Average Income	Total Income		Households With Income of Specified Type		Average Income	Total Income		Households With Income of Specified Type		Average Income	Total Income	
Income Type	N	%	$	$	%	N	%	$	%	%	N	%	$	%	%
Wage or Salary	173,133	75.7	15,882	2,749,698,306	66.9	96,290	81.0	18,030	1,736,062,293	78.7	76,843	67.0	13,191	1,013,636,013	53.2
Nonfarm Self-Employment	25,304	11.1	10,951	277,104,104	6.7	10,763	9.4	11,840	127,433,591	5.8	14,541	12.7	10,293	149,670,513	7.9
Farm Self-Employment	44,939	19.7	9,561	429,661,779	10.4	6,181	5.4	6,338	39,174,929	1.8	38,758	33.8	10,075	390,486,850	20.5
Interest, Dividend, or Net Rent	103,797	45.4	2,754	285,856,938	7.0	51,978	45.6	2,461	127,912,626	5.8	51,819	45.2	3,048	157,944,312	8.3
Social Security	60,991	26.7	3,816	232,741,656	5.7	25,169	22.1	3,951	99,447,994	4.5	35,822	31.3	3,721	133,293,662	7.0
Public Assistance	10,126	4.4	2,114	21,406,364	0.5	4,950	4.3	2,107	10,433,244	0.4	5,176	4.5	2,120	10,973,120	0.6
All Other	39,482	17.3	2,883	113,826,606	2.8	22,696	19.9	2,913	66,104,008	3.0	16,786	14.6	2,843	47,722,598	2.5
Total	**282,565**	**100.0**	**17,983**	**4,110,295,753**	**100.00**	**113,933**	**100.0**	**19,367**	**2,206,568,685**	**100.0**	**114,632**	**100.0**	**16,607**	**1,903,727,068**	**100.0**

SOURCE: "1980 Census of Population; Detailed Population Characteristics," PC80-1-D36 (November) 1983, (Table 243)

* The urban population, as defined for the 1980 Census, comprises all persons living in urbanized areas and in places of 2,500 or more inhabitants outside urbanized areas.

Table 14
Nonagricultural Wage and Salary Employment in North Dakota by Major Industry, History, and Projections

	Annual Employment Change				Employment						Percent Change in Employment				
	1970-1975	1975-1980	1982-1987	1987-1989	Current Estimates**				Projections		1984-	1985-	1986-	1987-	1988-
	Annual Change	Annual Change	Annual Change	Annual Change	1984	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989
Total Goods-Producing	**2,170**	**1,550**	**-1,890**	**150**	**36,670**	**33,900**	**30,850**	**30,600**	**30,600**	**30,900**	**-7.6**	**-9.0**	**-0.8**	**0.0**	**1.0**
Mining	98	1,148	-1,070	150	7,480	6,850	4,650	4,100	4,200	4,400	-8.4	-32.1	-11.8	2.4	4.8
Construction	814	528	-990	100	13,700	11,700	10,800	10,700	10,800	10,900	-14.6	-7.7	-0.9	0.9	0.9
Manufacturing	1,258	-126	170	-100	15,490	15,350	15,400	15,800	15,600	15,600	-0.9	0.3	2.6	-1.3	0.0
Total Services-Producing	**5,902**	**6,776**	**2,190**	**1,500**	**215,780**	**218,200**	**219,050**	**220,600**	**222,120**	**223,600**	**1.1**	**0.4**	**0.7**	**0.7**	**0.7**
Transportation, Communication, and Public Utilities	104	812	-160	50	16,410	16,500	16,100	16,000	16,000	16,100	0.5	-2.4	-0.6	0.0	0.6
Wholesale Trade	*	726	-380	0	20,510	20,000	19,400	19,200	19,300	19,200	-2.5	-3.0	-1.0	0.5	-0.5
Retail Trade	*	1,316	480	450	47,060	47,600	47,500	47,900	48,380	48,800	1.1	-0.2	0.8	1.0	0.9
Finance, Insurance, and Real Estate	302	580	150	50	12,210	12,500	12,450	12,500	12,560	12,600	2.4	-0.4	0.4	0.5	0.3
Services	1,904	2,058	1,280	1,300	57,400	58,000	59,200	60,600	61,930	63,200	1.0	2.1	2.4	2.2	2.1
Government	1,056	1,284	820	-350	62,190	63,600	64,400	64,400	63,950	63,700	2.3	1.3	0.0	-0.7	-0.4
Total* **	**8,072**	**8,326**	**300**	**1,650**	**252,450**	**252,100**	**249,900**	**251,200**	**252,720**	**254,500**	**-0.1**	**-0.9**	**0.5**	**0.6**	**0.7**

*Not available as discrete categories of employment.
**Years 1985 and 1986 are benchmarked 1987/1, 1987 estimates are benchmarked to 86/1.
***Totals may not add due to rounding.

earnings means that the consumption consequences of aggregate earnings growth requires interpretation unique to each industrial classification.) Average earnings will have to expand at a rate of 4 to 5 percent over the forecast period in order to grow as fast as the rate of inflation. As a result of extended growth in lower average earnings industries, it is expected that the incentive for greater labor force attachment (to offset lower average earnings) by an increasing number of family members will persist over the balance of the decade.

The employment forecasts presented in Table 14 are discussed in greater industrial detail in the next two chapters. The overall forecast wage and salary growth rate is adapted from Bradley (1987). However, abrupt transformations in the structure of several industries, the consolidation of markets, and the compact employment profile of many new firms, means that clear-cut precedents upon which to base equation building for trend projections are rapidly disappearing. The straightforward forecasts of employment growth for each industry have been modified to reflect updated and unpublished current employment estimates, and the insights of analysts conducting both current and community-based employment surveys.

New wage and salary job opportunities have not been sufficient in number to cover the loss of agricultural and other forms of self-employment. Moreover, nonagricultural wage and salary job loss has been restricted, primarily, to more rural counties, while employment in urban counties has expanded.

The data in Table 15 presents annual change rates summarizing rural and urban county wage and salary employment trends detailed in appendix Tables 15 through 19. Figures 2 and 3 provide a graphic portrait of employment change from 1982 to 1986. In general, these data document the shift in employment from western to eastern counties and can be used to identify trends in the movement of employment from less densely populated counties to counties with urban trade centers. Many of the more radical changes have largely worked themselves out by the end of 1986, and there are some exceptions to the general patterns of

Table 15
Nonagricultural Job Insurance Covered Employment for Rural and Urban Counties by Region
1983 to 1986

	1983 N	1982-83 % Change	1984 N	1983-84 % Change	1985 N	1984-85 % Change	1986 P/ N	1985-86 % Change
Region I								
Williams County	11,197	-17.5	11,491	2.6	10,831	-5.7	9,200	-15.1
All Other Counties	3,493	-16.3	3,563	2.0	3,351	-6.0	2,640	-21.2
Total	**14,690**	**-17.2**	**15,054**	**2.5**	**14,182**	**-5.8**	**11,840**	**-16.5**
Region II								
Ward County	19,067	1.8	19,409	1.8	19,341	-0.4	19,422	0.4
All Other Counties	8,302	-1.2	8,304	0.0	8,188	-1.4	7,969	-2.7
Total	**27,369**	**0.9**	**27,713**	**1.3**	**27,529**	**-0.7**	**27,391**	**-0.5**
Region III								
Ramsey County	4,627	4.4	4,667	0.9	4,671	0.1	4,714	0.9
All Other Counties	7,658	0.8	7,853	2.5	8,046	2.5	8,130	1.0
Total	**12,285**	**2.2**	**12,520**	**1.9**	**12,717**	**1.6**	**12,844**	**1.0**
Region IV								
Grand Forks County	24,055	2.7	24,373	1.3	25,282	3.7	25,950	2.6
All Other Counties	8,598	1.4	8,705	1.2	9,028	3.7	8,974	-0.6
Total	**32,653**	**2.4**	**33,078**	**1.3**	**34,310**	**3.7**	**34,924**	**1.8**
Region V								
Cass County	45,981	4.2	48,243	4.9	49,749	3.1	51,083	2.7
All Other Counties	11,332	0.2	11,688	3.1	11,433	-2.2	11,668	2.1
Total	**57,313**	**3.4**	**59,931**	**4.6**	**61,182**	**2.1**	**62,751**	**2.6**
Region VI								
Stutsman County	8,447	1.6	8,517	0.8	8,597	0.9	8,482	-1.3
All Other Counties	11,551	0.3	11,451	-0.9	11,337	-1.0	11,375	0.3
Total	**19,998**	**0.9**	**19,968**	**-0.2**	**19,934**	**-0.2**	**19,857**	**-0.4**
Region VII								
Burleigh/Morton MSA	33,395	2.3	33,956	1.7	34,198	0.7	34,277	0.2
McLean, Mercer, and Oliver Counties	13,230	32.9	10,474	-20.8	8,773	-16.2	7,517	-14.3
All Other Counties	3,100	-4.3	3,114	0.5	3,091	-0.7	3,059	-1.0
Total	**49,725**	**8.5**	**47,544**	**-4.4**	**46,062**	**-3.1**	**44,853**	**-2.6**
Region VIII								
Stark County	9,891	-13.3	9,690	-0.2	9,303	-4.0	8,713	-6.3
All Other Counties	5,277	-10.9	5,278	0.0	5,051	-4.3	4,742	-6.1
Total	**15,168**	**-12.5**	**14,968**	**-1.3**	**14,354**	**-4.1**	**13,455**	**-6.3**
State								
Urban Counties	156,660	0.0	160,346	2.4	161,972	1.0	161,841	-0.1
SNG Counties*	13,230	32.9	10,474	-20.8	8,773	-16.2	7,517	-14.3
Rural Counties	59,311	-2.2	59,956	1.1	59,525	-0.7	58,557	-1.6
Total	**229,201**	**0.9**	**230,776**	**0.7**	**230,270**	**-0.2**	**227,915**	**-1.0**
INA	505		473		487		462	
STATE TOTAL**	**229,706**	0.7	231,249	0.7	230,757	-0.2	228,377	-1.0

P/ Preliminary.

*Synthetic Natural Gas Construction Counties--McLean, Mercer, and Oliver.
**Totals may not add due to rounding.

SOURCE: North Dakota Employment and Wages, 1985 and 1986.

employment trends. These exceptions appear to be best explained by population growth and changes in manufacturing and government employment.

Employment decreases in oil and gas exploration were largely responsible for the dramatic drop in overall wage and salary employment from 1985 to 1986 in Regions I and II.[4] Employment in the mining industry stabilized in mid-1987, and appears headed for gradual growth during 1988 and 1989. The radical drop in employment in the construction industry in rural areas of Region VII was largely completed by the end of 1986. Without the intervention of the boom and bust cycle in energy construction, it is more likely that Region VII's recent employment history would have followed a pattern comparable to that of Region II and Region VI. Regions II, VI, and VII share comparable ecologies which strongly influence each region's agricultural base (see Map 2 in the final appendix for an overview of the state's topography) and supporting wage and salary economy. The future of these three regions is expected to be more consistent with one another as the impact of the boom and bust in energy-related construction in Region VII subsides. Although the ecology of Region III is in many ways comparable to that of Region II and Region VI, Region III's economy is strongly and positively influenced by population growth among its rural minority population (see appendix Table 5 for trends in head count enrollment data for rural counties with American Indian Reservations). Region III has also experienced some success in capitalizing on the role of minority-owned manufacturing and on processing unique agricultural products. These efforts have served to expand wage and salary employment despite the same kinds of environmental constraints to agriculture shared by regions to the west and south.

Wage and salary employment growth in Region IV's Walsh County is largely attributable to employment growth in

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[4] Map 1 in the final appendix identifies the boundaries of Planning Regions, American Indian Reservations, the location of Job Service offices, and provides county names.

FIGURE 2

NONAGRICULTURAL JOB INSURANCE COVERED EMPLOYMENT
1982–1986: PERCENT CHANGE

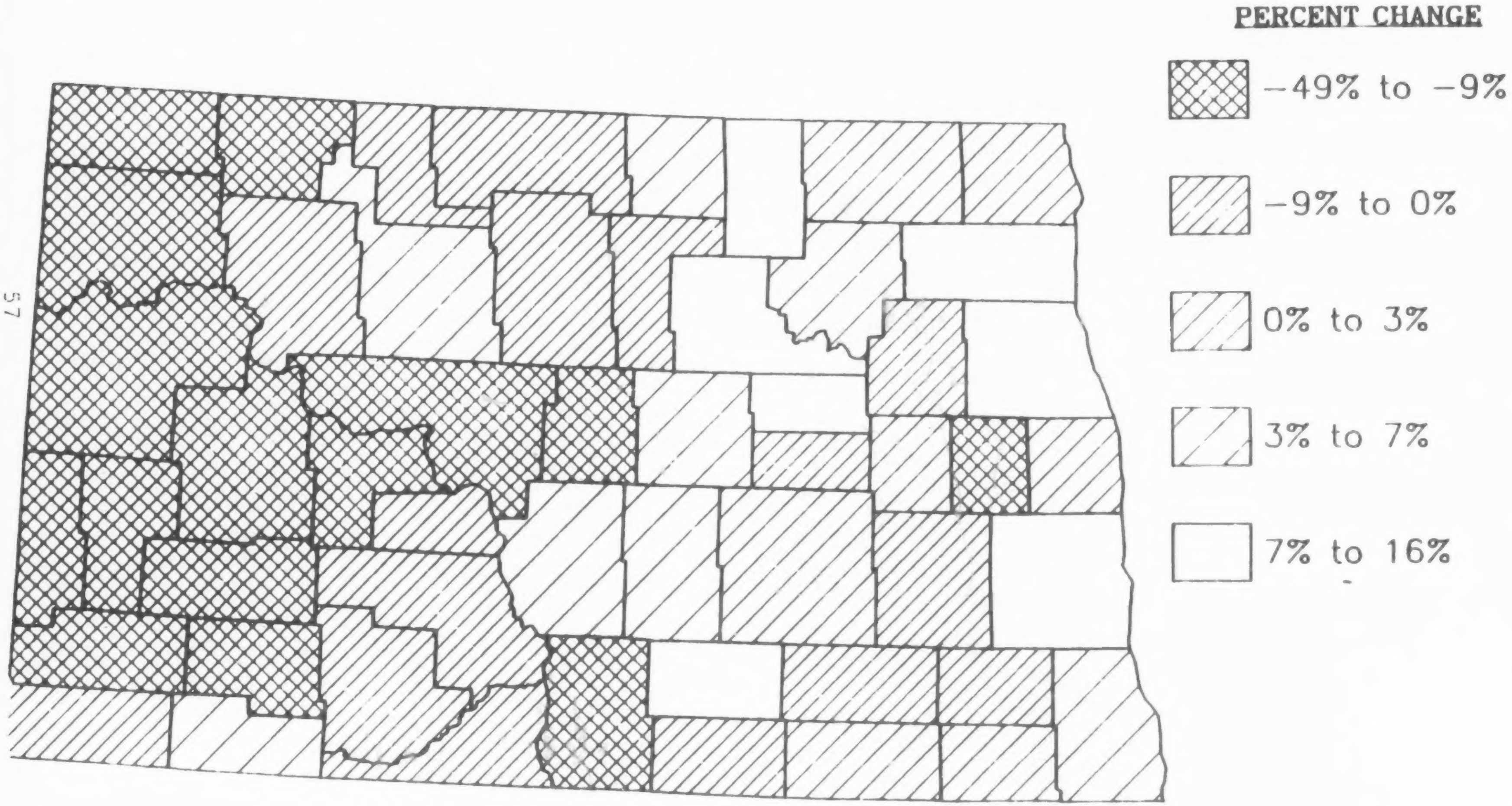
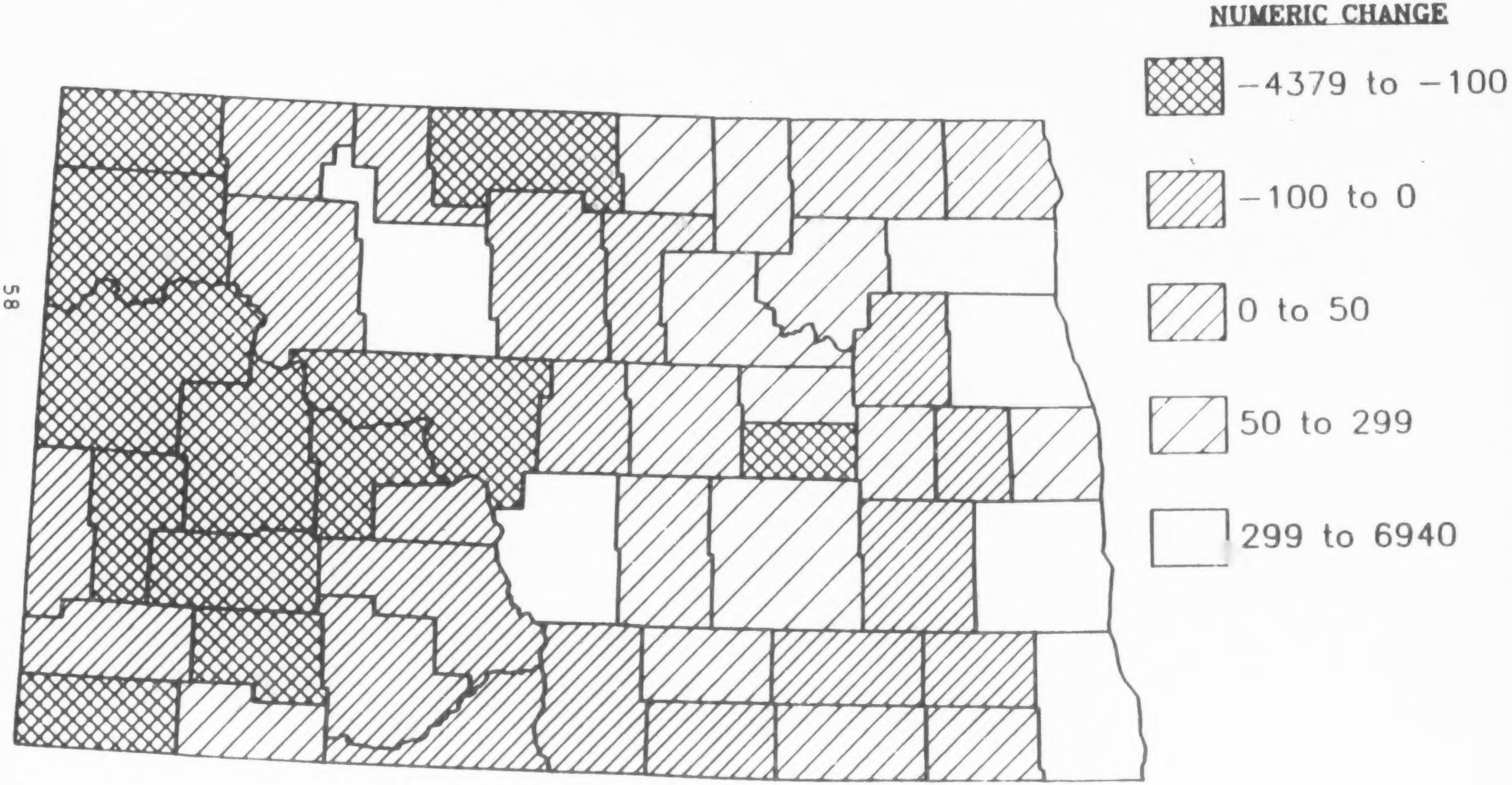


FIGURE 3

NONAGRICULTURAL JOB INSURANCE COVERED EMPLOYMENT 1982–1986: NUMERIC CHANGE



government. Eastern North Dakota, as a whole, has benefited from broader diversity in its agricultural base and a more benign climate. Eastern counties also dominate the state's wholesale trade-transportation complex, benefit from expanding manufacturing firms, the development of specialized health care, and other services, as well as expansion of employment in government.

The underlying trends within each region's economy change more slowly than industry-specific boom and bust cycles of the early part of the decade. Both cyclic and trend change has, however, brought about substantial change in the characteristics of firms and jobs. During 1987, in marked contrast to 1985 and 1986, nonagricultural wage and salary employment showed modest growth. Modest growth in overall employment is forecast for 1988 and 1989. However, at least initially, new jobs are more likely to appear in industries in which earnings growth rates have not kept pace with the rate of inflation. Finally, not only are employment opportunities expected to be limited to comparatively narrow industrial classifications, they are also expected to be found in a limited number of geographic areas.

VI. NONFARM, GOODS-PRODUCING INDUSTRIES

The number of jobs in nonfarm goods-producing industries declined, in some cases precipitously, between 1982 and 1986. The value of tangible new products from the construction, mining, and manufacturing industries saw broad swings in the recent past and these changes have had a radical impact on employment. Now, however, it appears that many of the major industrial components making up this broad classification of industries have reached a sustainable, if not modest, rate of employment growth.

Employment in North Dakota's construction industry responded strongly to the housing boom of the late 70s and early 80s. The housing boom, itself, was partly a response to the rate of household formation then being established by the baby boom generation, and partly a response to energy development. Energy development directly, and the elaboration of the pipeline, highway, and street transportation systems supporting development, led to an early 1980s construction boom which ran strongly counter to the national recessions of early 1980 and 1981II to 1982IV. Employment in the construction industry stood at 21,350 jobs in August of 1983. The history of the industry since that time has been largely a chronicle of its decline. By August 1986, employment in the construction industry stood at 13,900 (-34.9%) jobs.

In 1986 and 1987, construction employment in North Dakota remained at 4.3 and 4.2 percent, respectively, of total nonagricultural wage and salary employment. Most states in the West North Central Region have not gone through an episode of boom and bust in energy development. However, during the same time, these states have maintained construction employment at slightly more than 4 percent of all jobs. It appears, then, that the present level of construction employment in North Dakota is very near to the "normal" ratio for the Region's states. In the absence of unique stimulus, construction employment is expected to retain its relative position in the overall economy and demonstrate slow growth for 1988 and 1989.

Despite overall slow growth, recent historic events indicate that components of the industry are changing at different rates. Building construction employment (for detailed estimates, see Appendix III) dropped from 3,200 in 1985 to 2,800 jobs in 1987. At the same time, street, highway and heavy construction declined to 2,800 jobs from 3,300 jobs in 1985. No growth, to slight decreases in average employment, are forecast for these two industries during 1988 and 1989. On the other hand, special trades construction (firms engaged in plumbing, heating, air conditioning, decorating, electrical work, masonry, flooring, and comparable enterprises) has shown growth and is expected to continue offsetting employment declines in building and heavy construction. It appears that housing construction, and the maintenance and renovation of existing homes and other buildings, is responsible for the expansion of this industry.

Major factors constraining building and heavy construction during 1988 and 1989 are:

- Sufficient electrical generating capacity forestalls the need for facilities construction.
- An era of limited availability of public funds for facilities and road construction.
- Comparatively slow growth in employment and personal income.
- Comparatively high real interest rates.
- Suppressed need for additional agricultural commodities storage facilities as exports expand.

Finally, by 1990, the last cohort of the baby boom generation will be 26 years of age and past the point when first households are traditionally formed. (Savacool 1987:1.17) The first cohort of the boom generation was 26 years old in 1973. It and succeeding cohorts from the boom generation, through household formation, provided much of the impetus for housing construction and related community facilities and roadways during the next ten years. The aging of the boom generation means that the era of dependable demand in the form of rapid expansion in the number of first-time home buyers has past.

Even though demographic forces are not available to exert the same upward pressures on construction that they once did, employment and population growth, rural to urban migration, and the expansion of services-producing industries should serve to continue improving the picture for special trades construction. As indicated elsewhere, we expect employment growth to follow recent historic trends, and focus in a limited number of geographic areas in the state. Construction is expected to follow and contribute to, rather than lead, these trends.

Little or no growth in building and heavy construction implies a flat balance of the decade for employment in industries providing services or goods to the construction industry. The sand and gravel component of the mining industry, segments of the durable goods wholesaling industry providing supportive services to the construction industry, and the stone and clay, and fabricated metals segments of the durable-goods manufacturing industry are tied to construction and forecast to grow slowly.

Employment in the manufacturing industry has been characterized by a struggling durable goods manufacturing sector, but at the same time, a steadily growing nondurable goods manufacturing sector. In 1985, 41.4 percent of the manufacturing industry's employment was found in durable goods; by 1989, durable goods employment is expected to decline to 39.7 percent of all manufacturing employment.

Although total manufacturing employment is projected to have a flat growth rate for 1988 and 1989, the manufacture of farm machinery, a major component of the durable goods manufacturing sector, is likely to experience constrained product demand. "Farm machinery sales are more dependent on real interest rates and farm equity than are nondurable (production) input sales...fewer acres in production and lower commodity prices have decreased the return to farm machinery, also reducing farm machinery demand... (in addition) ... producers are expected to continue using (their improved financial condition) ... to retire debt." (Agricultural Outlook 1987a:23) To the extent that farm income during the balance of the decade remains problematic, new farm income is used to retire debt, and crop land is taken out of production, new equipment sales are unlikely to expand. Even though the fall in the value of the U.S. dollar contributes to the competitiveness of domestically produced farm equipment, the overall demand for machinery is expected to be constrained by low world prices for agricultural products and domestic agricultural policy.

Because farm machinery is expensive, producer purchases are limited by interest rates and the rate of income returned from new equipment. On the other hand, nondurable goods are frequently less expensive, and sales are made for the purpose of immediate consumption rather than as a long-term production investment.

Over half of the employment in nondurable goods is found in the food processing industry. Import restrictions on certain processed foods, and expanding markets for pasta, snack, and health foods have offset long-term national and local employment trend decreases in dairy and bakery products. At the same time, the printing and publishing industry continues its gradual employment expansion.

The balance of durable and nondurable goods manufacturing is comprised of defense sustained, and industrially unrelated firms which may represent the sole firm in each industry. As a group, these firms have demonstrated slow, moderate employment growth during 1985-1987. Given the fall in the dollar, it appears that marketing conditions will remain at least moderately positive. However, because the outlook for many of these firms depends upon episodic defense contracting, nonmarket factors, and nonresident corporate decisions made on behalf of unique firms, rather than local interests, employment projections become extremely tenuous.

In summary, manufacturing employment in the aggregate is not expected to grow much beyond its present level of 15,700 jobs during 1988 or 1989. The forecast for new farm machinery and manufactured goods for the construction industry suggests that demand will be insufficient to spur employment growth. At the same time, nondurable manufacturing firms have been able to fill unique niches and possess evolving labor market needs. Employment growth in nondurable goods has permitted the manufacturing industry, as a whole, to break even in total employment and is expected to continue doing so.

The first half of 1987 saw significant activity in the Persian Gulf, which, according to the Energy Information Administration, once again generated a degree of nervousness in crude oil markets. "In July, spot prices of crude oil were fluctuating daily, with highs around $22 per barrel for West Texas Intermediate, despite the official Organization of Petroleum Exporting Countries (OPEC) price of $18 per barrel. As of the end of July, it was estimated that the average cost per barrel of imported crude oil delivered to the United States was over $19. The fundamentals, however, are still pointing to essentially flat consumption, with world oil prices close to $18 per barrel, for the ... (second half) ... of 1987. In 1988, an increase in world oil prices to $19 is expected, based on steadily rising demand..." (Short-Term Energy Outlook 1987a:1) Although modest, the price increase anticipated for 1988 is above the rate of inflation, and when viewed as part of a longer term trend, is a key determinant in the industry's domestic employment expansion.

Following the stock market crash in October, major forecast institutions still indicated a stable to modest growth in the outlook for oil prices. "The average refiners' acquisition cost is still assumed to remain between $18 and $20 per barrel through 1990. With slower world growth following the stock market crash, the odds for lower oil prices have increased." (Chimerine, et al. 1987b:3) However, cautions an analyst of North Dakota's economy, "... this growth will be highly volatile and will not be adequate to bring oil prices back to their 1985 levels. From 1986 to 1989, the average refiners cost of crude oil is expected to increase 10.4% on average per year, while inflation as measured by the consumer price index is expected to grow at 4.4% per year." (Bradley, 1987: 10.35) Even after the stock market crash, and in light of slow anticipated national economic growth in 1988, the forecast price for oil is still moderately positive. On the other hand, it is also evident that major unforseen non-market events, such as those which raised oil prices in the first half of 1987, could again jar future oil prices from their forecast course.

Analysis of historic data for North Dakota suggests that expectations about long-term price trends are more important determinants of employment growth in the mining industry than are multi-quarter trends in unit price. Drilling and well site investment are so great that recovery of the initial investment can only take place over a period of years. This makes expectations about future price trends more important, in current drilling strategies and employment effects, than recent price developments by themselves.

Illustrated in the accompanying chart are historic data for employment in the oil and gas extraction industry, and the number of exploratory wells and development wells drilled from 1977 to 1986.[1] Exploratory well drilling is far more important in accounting for the overall trend in oil and gas extraction employment because exploratory well drilling is accompanied by seismic crew support in the mining industry.

Imported crude oil prices dropped from an annual average of $33.55 per barrel in 1982, to $28.57 in the second quarter of 1983. Prices then rose above $29 per barrel in the third quarter of 1983 and remained between $28.89 and $29.19 for five consecutive quarters. Industry response to the 1983III price increase and subsequent five quarters of price stability was demonstrated most dramatically in the number of development wells drilled. In the absence of seismic crew activity, development well drilling had comparatively little impact on employment in the mining industry. In effect, relatively high stable prices alone were insufficient to precipitate the kind of employment growth associated with the labor-intensive cycle of exploratory

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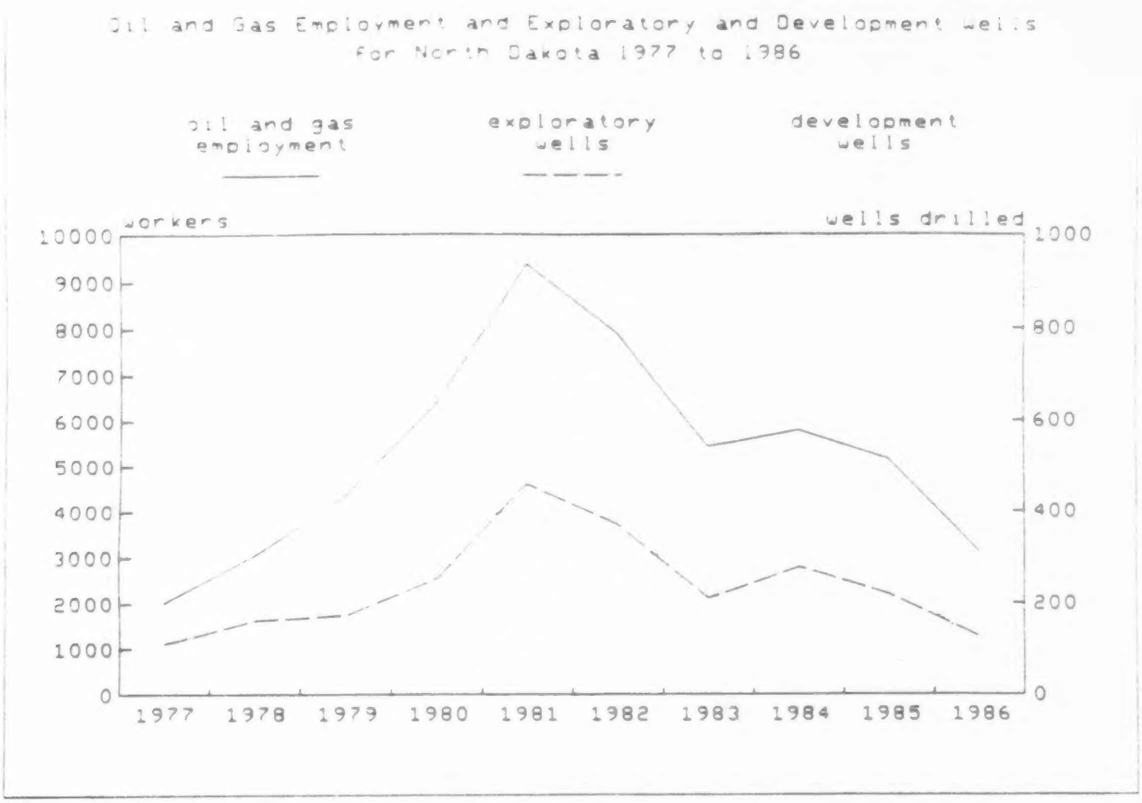
[1] Drilling count data -- The Oil & Gas Producing Industry in Your State, Independent Petroleum Association of America (September) 1987

Figure 4



Oil and Gas Employment and Exploratory and Development Wells for North Dakota 1977 to 1986

well drilling found over 1980 to 1982 period. Expectations about longer term trends in prices would appear to offer a better explanation for exploratory well activity, and current employment trends, than analysis of current prices and highlights of active rig counts.

In the longer term, uncertainty over world supply, a changing rate of consumption, and price may inhibit investor confidence in exploration and development. The general trend, however, is one of growing real prices for oil.

Structurally, the rapid expansion of oil prices in the 1970s and early 1980s set in motion a series of conservation measures, especially those relating to automobiles, which will impair the future demand for motor fuels. In addition, the national shift away from goods-producing industries, and the greater use of more efficient production technologies will mean that future national growth rates will not have the same implications for energy demand that they once did.

Under the middle course national projections of petroleum consumption. the volume of petroleum use increases only slightly from 16.1 million barrels per day to 16.5 million barrels per day between 1986 and 1995. And an increasing share of future consumption is expected to come from imported rather than domestic supplies. "Oil production in the United States has declined about 10 percent from its peak in 1970. The drop would be more ... except for the oil from Prudhoe Bay ... (which) ... now accounts for one in every five barrels of oil produced in the United States. Production from Prudhoe Bay will probably reach its highest level this year and show a decrease each year from now on ... " (Bluemle 1987: 11) Net imports, then, are expected to rise from 5.2 to 8.2 million barrels per day between 1986 and 1995 in order to meet domestic consumption needs. (Data -- Annual Energy Outlook 1987:3)

The Energy Administration suggests that declining domestic production, and declining known non-OPEC world reserves as a result of low prices, means that OPEC's excess production capacity will dominate the petroleum market between 1986 and 1992. (Annual Energy Outlook 1986:4) Given the current level of world oversupply, "... oil prices (in constant 1986 dollars) are expected to remain below $20 per barrel until 1992, when they are projected to increase by about 6 percent per year in real terms ..."(Annual Energy Outlook 1986:5) Other analysts indicate, however, that the timing of the turnaround in prices may come earlier: " ... by about 1990 we should expect prices to start up again ..." (Bluemle 1987:11) It is the expectation, then, that by the end of the decade the real value of oil prices will rise. There is uncertainty, however, over the timing and rate of oil price changes, and that uncertainty may be increasing. In the summer of 1987, for example, " ... it appeared that most OPEC member countries favored a $2-per-barrel increase in the OPEC reference price to $20 per barrel, an increase that would help to compensate for the declines in member country purchasing power caused by the fall in the value of the U.S. dollar and by inflation." (Short-Term Energy Outlook 1987b:9) The persistently low value of the dollar during 1988 may add impetus to an OPEC supported increase in prices prior to the turn of the decade.

In addition to an expectation of price increases towards the end of the decade, reduced costs represent an added boost to future exploration and employment increases. "Exploration and development costs in the industry are down sharply and should make possible an expansion of drilling from current lows..." (Annual Energy Outlook 1987:1) In North Dakota, for example, the monthly average (inflation-adjusted) wage in 1986 was 2 percent lower than in 1982. Double-digit wage rate increases, during the 1980 to 1982 boom, were caused partly by bottlenecks attributable to the rapid increase in the need for labor. The slow employment growth in oil and gas drilling anticipated for the state during the next two years is, by its nature, unlikely to create the kinds of labor market bottlenecks and rapid salary increases experienced during the first part of the decade.

Employment in the oil and gas exploration industry fell throughout 1986 and the first half of 1987. By the second quarter of 1987, employment in the industry had declined to an estimated 2,400 jobs. Employment rose slightly in the third quarter and, if sustained, will reach a fourth quarter average of 2,800 jobs. Given the constraints imposed by uncertainty over prices and supply, the long-term positive outlook and recent trends in employment still suggests that employment will average near 2,900 jobs during 1988, and trend towards more than 3,000 jobs in 1989.

Labor disputes in the coal industry depressed employment estimates for the fourth quarter of 1987. Resolution of this dispute will positively influence annual average employment in 1988.

Employment in the coal industry in 1987 at 1,090 jobs (24.8% of all jobs in the industry) was divided among a handful of firms. These firms primarily provide coal for resident electrical generating facilities (which, in turn, provide electricity for North Dakota and other states in the region) and nonresident electrical generating facilities. This means that decisions by individual firms, often inspired by unique conditions outside the state, can have radical impacts on employment in North Dakota. For example, the Energy Information Administration reported that electricity demand from coal-fired electrical generating plants was positively influenced in 1987 by the need to offset the loss of hydroelectric power due to the lack of precipitation in western mountain states. Market, and unique nonmarket factors outside the state, can have a strong unanticipated impact on local employment in the coal mining industry.

Energy Administration forecasts for coal mined to produce electric power suggests that there will be no strong upsurge in demand over the 1988 to 1989 period. "Electric utility coal use should remain steady between 1987 and 1988, with nuclear and hydroelectric generation dominating the rise in electricity generation." (Short-Term Energy Outlook 1987b:30) Following resolution of the strike in the coal mining industry, annual average employment in the industry is expected to remain very near the 1,100 mark.

In summary, employment in the nonfarm goods-producing industries of construction, mining, and manufacturing declined by 3,050 jobs from 1985 to 1986. Between 1986 and 1987, employment grew slightly to an estimated 3,420 jobs. We are forecasting employment growth among these industries will reach an annual average of 30,900 jobs by 1989. Our discussion indicates, however, that the growth is jeopardized by uncertainty, and that within the major industrial categories, themselves, fairly substantial shifts are taking place in the industrial locus of growth.

VII. SERVICES-PRODUCING INDUSTRIES

Nationally, the number of nonfarm wage and salary jobs in the services-producing industries of trade, finance, services, transportation and communications, and government grew by 3.0 percent from 1985 to 1986, and by (an estimated) 2.5 percent from 1986 to 1987. For the same periods, employment in North Dakota's services-producing sector grew by 0.4 percent and 0.8 percent respectively. Nationally, over the short term, employment growth in the complex of firms referred to as services-producing industries is expected to be limited by slower economic growth, or a recession, before the close of the decade. Over the longer term, the rate of growth in services-producing employment is projected to advance, but at a declining rate of increase.

Trends characterizing employment growth in North Dakota's services-producing industries over 1988 and 1989 are:

- Slow demographic and personal income growth limiting services-producing employment growth to a rate below the U.S. average.
- Slow growth in services-producing industries which provide supportive services to goods-producing industries.
- An expansion of services-producing employment's share of wage and salary jobs from 85.5 percent in 1984 to 87.9 percent in 1989.
- In contrast to mid-level wages in goods-producing industries, earnings in services producing industries are concentrated in low and high earnings occupations.
- Several industries are established on new historical footings after a mid-decade period of consolidation and reorganization.
- An aging population and an increasing number of dual earner families continuing to create the need for additional services.

In the United States, from 1979 to 1986, employment in the services-producing sector grew at an annual average rate of 2.4

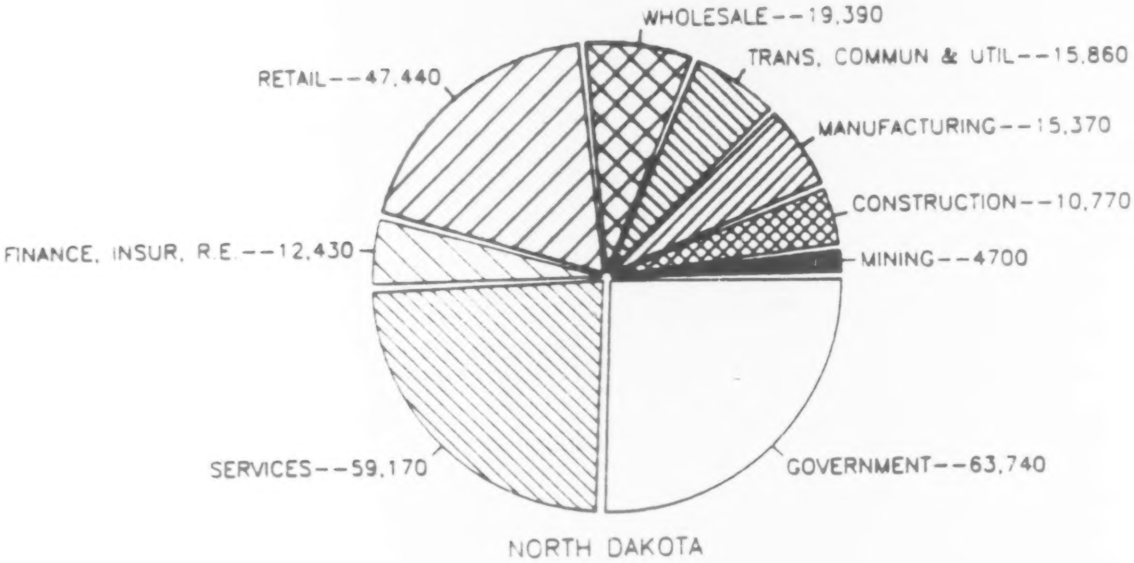
percent. The annual average rate of change projected by the Bureau of Labor Statistics for the period 1986 to the year 2000 is 1.7 percent in the most probable (moderate) economic growth rate scenario, and 1.9 percent in the high growth or best-case projection. (Personick 1987:32) Employment growth in services is predicated largely on population, personal income growth, and innovation in applied technology. Thus, a slower rate of national population growth on the demand side is expected to slow employment growth. At the same time, on the labor supply side, a decrease in the availability of younger individuals, due to the maturing of the baby boom generation, and an increasing desire/need on the part of more middle-aged females to work at full-time rather than part-time jobs, are two of the reasons given for the slower rate of growth forecast for services-producing employment at the national level. Even so, by the end of the century employment in the services-producing sector is expected to climb from 75.1 percent in 1986 to 79.3 percent of all nonagricultural wage and salary jobs.

In 1986 (largely due to the modest share of manufacturing employment in North Dakota), 87.7 percent of all nonagricultural wage and salary jobs in the state were found in the services-producing sector. Consequently, even the modest growth rates anticipated for this industry, as a whole, are likely to be associated with a comparatively large number of new jobs. However, in contrast to goods-producing industries, average earnings tend to be less. Comparatively low earnings, in turn, limit personal consumption expenditures, savings, and access to credit.

In North Dakota, average earnings in services-producing industries, at a monthly average of $1,255.88 in 1986, represented almost three-fourths of average monthly earnings in goods-producing industries. Average monthly earnings in the goods-producing industries of construction, manufacturing, and mining were $1,691.46 (annualized at $20,297.52) in 1986. Thus, even though the outlook in North Dakota for employment growth rates in the services-producing sector of 0.6 percent and 0.7

FIGURE 5

NON-FARM WAGE & SALARY EMPLOYMENT 1986



percent for 1988 and 1989 are positive (see Table 14), the secondary or multiplier effect on the creation of new jobs is muted in comparison to employment growth in goods-producing industries.

A second phenomenon associated with services-producing employment is that earnings tend to be concentrated in relatively low and relatively high earnings occupations. In contrast, goods-producing employment is dominated by occupations in middle-range wage categories. In the finance, insurance and real estate industry, for example, 62.4 percent of the employment is found in clerical or services occupations, while 24 percent of the occupations are classified as professional, managerial, or technical. In contrast, only 13.3 percent of the jobs in the manufacturing industry are found among professional, technical, and managerial occupations, while 66.1 percent of the jobs are classified as production and maintenance occupations.[1]

Annualizing the hourly wage rates found in Table 11, it can be shown that credit and collections managers, an occupation typically found in the finance, insurance, and real estate industry, earned $23,296 (based on the "all city" average for 1986). At the other end of the finance industry's occupational structure is the clerk typist position, earning approximately half that amount at $12,397 per year.

In contrast to occupations in finance, machinery/lathe operators (an occupation found in the production phase of manufacturing) earned a middle-range annual salary of $19,365. How occupations and their associated earnings are distributed across the services-producing industries (and how job holding is distributed among families) affects the share of personal income spent locally.

Exclusive of family structure, individuals in low-wage occupations must spend nearly all of their earnings to meet immediate needs. Upper income earners, on the other hand, can channel a significant share of their consumption to highly specialized, and, therefore, extra-local markets. As consumption patterns increasingly come to be dominated by higher-earnings professionals and lower-earnings support staff (and less by middle-income earners), the purpose of spending and the proportion of all personal income likely to be spent locally changes. These changes have secondary impacts on local employment in retail and wholesale trade as well as personal service industries.

With specialized consumer markets located in highly urbanized areas, it would appear that discretionary income is more likely to be spent in regional or national, rather than state or local, markets. In effect, over the longer term, the movement towards increased employment in the services-producing sector changes consumption patterns even though total personal income remains at a real dollar constant. Changing consumption patterns, in turn, add an emerging element of complexity to forecasting secondary employment growth impacts in state and local economies which is not present in national projections.

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[1] Occupational staffing patterns are found in: Broschat, Duane "Finance, Insurance and Real Estate; North Dakota Occupational Profiles," Job Service North Dakota (May) 1986, and "Manufacturing" (forthcoming).

On the national level, services-producing employment growth is dependent upon personal income growth and demographic change, particularly in the demand for medical services and in the consumption of amusement and recreation services. Convenience services for the increasing number of two-earner families are another source of services industry growth. Also related to the growing number of two-earner families is the increasing demand for medical and social services for younger and older members of the family. A final theme responsible for national services employment growth is the increasing occupational specialization in the application of new, especially computer-based, technologies.

These phenomenon also serve to create job opportunities at the state level. However, North Dakota's personal income, and new job growth rate in agricultural and nonagricultural goods-producing industries has not kept pace with the nation's. And there are indications that slow state-level growth in goods-producing industries will continue to constrain employment in the services-producing sector.

In addition, because more specialized services require an ever larger population base in order to be economically viable, technology itself contributes to the urbanization of employment. For certain service industries, centralization may mean the export of service jobs to urban areas outside the state. Based on recent historic trends, segments of the transportation, communications, medical services, and wholesaling industries appear to lend themselves more readily to technological change, occupational specialization, and the concentration of employment in state level or multistate regional employment centers.

One reflection of the secondary impact of lower state personal income growth is the slowdown in the growth of employment in the public sector.[2] Employment in local education rose by 300 jobs in 1986 to 16,900. Two trends evident in 1987, and expected to continue in 1988 and 1989, however, are the shift in employment from more rural school systems to those in larger communities, and a tendency toward an overall reduction in total employment. Employment growth in the balance of local government, on the other hand, has tended to offset the modest employment decline in education. But here, too, employment is shifting from more rural areas to larger metropolitan settings.

Cutbacks in state government employment, in particular those which took place following community placement of the developmentally disabled, took place during 1987. The decrease in employment was gradual. Its absence, however, will become increasingly evident in the data series during 1988. Preparation for the legislative session during 1988IV, and the provision of legislative services during the first and second quarters of 1989, will increase employment in this sector. But state government employment during the session is "episodic," lying outside the main trend in state government employment. Although employment in higher education has been limited by financial constraints, trends during the first six months of the biennium indicate that the effects of financial constraints on employment are less apparent than are the impacts on the time-lagged Job Insurance covered earnings data series. It appears that resource constraints have led to more part-time employment rather than a major employment decrease. If current trends persist for the remaining three quarters of the biennium, employment is likely to remain stable while total earnings in the industry slows substantially, failing to keep pace with the rate of inflation.

Irregular periods of growth in federal government employment are expected during 1988 and 1989. The 1987 Census of Agriculture (administered in 1988), administration of the 1985 Farm Bill, planning of the 1990 Decennial Census, several nonfarm economic census activities, as well as the potential for federal construction project planning and evaluation, will put upward pressure on federal civilian employment during the next two years. On the other hand, offsetting employment decreases relating to military restructuring will hold employment down during the balance of the decade and net growth is expected to be moderate.

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[2] See Appendix III for recent historic tabular data on employment by industry.

In summary, total employment in state and local government in North Dakota is expected to depart from the national pattern of growth. Even though the projection of government employment, at 63,700 jobs in 1989, is down only slightly from the annual average of 64,400 jobs in 1986, it is expected that total wages associated with the industry will not rise as quickly as the rate of inflation, and a greater share of the employment will be found in more urbanized counties at the end of the projections period.

Placement of the developmentally disabled in community settings contributed to the surge of employment among private social service agencies during 1987. With the initial phase of community placement accomplished, and for other reasons as well, the employment growth rate in the services industry, as a whole, is forecast to grow at a somewhat slower rate in 1988 and 1989. Services industry employment grew by 2.5 percent in 1987, and is expected to grow by 2.1 percent in each of the forecast years. Employment in services grew even during the difficult labor market year of 1986, and was complemented with one of the smallest covered unemployment rates of any industry (see appendix Table 8).

Estimates for major industries within the broader classification of services indicate that the only sector not experiencing employment growth in 1987 was "lodging" which remained at 4,200 jobs. Employment in "business, personal, recreation," and "other" services continued to grow. These are firms which frequently exploit new technologies in developing markets or meet an emerging need to provide new, frequently unique services to dual earner families.[3]

As the baby boom generation matures, the demand for medical services also rises. Employment in "other health" services (i.e. offices of physicians, dentists, and other providers) grew from 6,300 to 6,500, from 1985 to 1986, and advanced an additional 300 jobs in 1987.

Employment in the balance of the health care industry (which grew from 18,700 to 19,200 jobs from 1986 to 1987) has been exposed to several dramatic trends and changing conditions over a very brief period. Formerly discrete business entities of hospital, nursing home, pharmacy, and clinic (often located in different communities) functioned as autonomous firms as recently as 1984. Now, however, many of these firms have been merged into integrated regional health care service providers. In 1984, Job Service published employment for the dominant classification of firm in the industry -- hospitals -- at 13,060 jobs. Nursing and personal care services were estimated at 5,960 jobs. The changing structure of the health care delivery system has made these distinctions obsolete.

Some of the major trends shaping the health care delivery system (and other services-producing industries as well) are rural to urban migration, slow personal income and population growth, and an increasingly more middle-aged population. In addition, comparatively new medicare/medicaid health care cost containment policies, and the related information management needs associated with these policies, have created a shift within the industry's occupational structure. Employment growth has also been sustained by the retention of economically viable

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[3] Evidence from the Community Employment Surveys (see Table 12 for summary employment results from these surveys, firm size data for each community are available) suggests that average firm size in some industries is becoming smaller. A trend towards smaller firms implies that firm-specific occupational staffing patterns are becoming less complex, while at the same time, firms are relying more on the business services of other firms for temporary but highly specialized services. Individual firms may be trending towards greater occupational simplicity. But, through a new focus on communication, firms are working together in temporary, complex organizations to accomplish unique tasks.

technology even as more specialized occupations are added to support new technology. In addition, the industry has sought to market labor-intensive specialized services to increasingly narrow population segments, especially those in the boom generation. Many of these marketing attempts appear to have reached a saturation point. Market saturation implies that employment growth is much less likely to be as vigorous in the very near future as it has been in the recent past.

Employment in retail trade, not unlike health care services, is sensitive to personal income and population trends. Employment in the industry dropped slightly in 1986 (perhaps in response to the failure of consumer real wages in the state to keep pace with the rate of inflation, and because farm subsidy payments have been used to retire debt). Even more striking is the fact that average monthly earnings per job rose by only one dollar (see appendix Table 24). The low average wage rate growth during 1985 and 1986 has served to support the interpretation that employment in the retail trade industry has come increasingly to represent part-time employment.

Whether additional hours, higher average hourly wage rates, or additional jobs will be added as the industry responds to improving consumer income is not clear. Employment, however, is forecast to grow at a rate of just under 1.0 percent during 1988, and then again during 1989. The impetus for growth in the number of new jobs, and more hours worked, is partly a function of growing personal income. But new jobs, rather than additional hours of work among those already employed, is also partly a function of an increasing number of new firms, and this process itself has not abated. The number of new "eating and drinking" establishments, for example, represents a response to the continuing increase in consumer (especially two-earner family) food expenditures away from home. (Consumer Expenditure Survey Results 1985) New jobs in retail trade will continue to be created by new firms in the restaurant business, as well as by firms in other sectors of retail trade.

Employment in finance, insurance and real estate grew by 0.6

percent from 1986 to 1987 (to 12,500 jobs). A slower rate of growth is forecast for 1988 and 1989. Employment in banking dropped in 1986 and remained stable in 1987. Nonbank credit firms, credit unions, and savings and loans went through a period of consolidation in 1985-86. In the spring of 1987, Farm Credit Services and Production Credit Associations also went through a period of reorganization. Stability in farm land prices and farm loan repayment should provide positive support for employment in the industry over 1988 and 1989. On the other hand, rising interest rates and a slow rate of personal income growth will serve to limit new employment opportunities in the industry with the average number of jobs forecast to grow to an annual average of 12,600 in 1989.

A substantial amount of employment in wholesale trade and the transportation, communications, and public utilities industries is tied to the provision of services to goods-producing industries, rather than directly to the population of the state. Given the mid-decade difficulties in the goods-producing sector, it is not surprising that wholesaling, and transportation, communications, and public utilities were the only services-producing industries which failed to register a positive employment growth rate during 1987. In addition, these industries will have the most difficulty making employment progress during the balance of the decade.

Durable goods wholesaling is involved in providing sales to the construction industry, the sale of equipment for oil and gas exploration, and in the sale of farm machinery. Nondurable goods wholesaling provides chemicals for both the mining and agricultural industries as well as handling the storage of agricultural commodities and products, such as groceries and clothing. Improvement in the mining industry and nominal grain price increases should buoy employment in wholesaling in 1988. But the expanded diversion of land for conservation purposes, increased acreage set aside requirements of the 1985 Farm Bill in the 1988/89 crop year, and uncertainty over the timing of grain and petroleum price increases are expected to have a dampening effect on employment in 1989.

It appears quite likely that total employment in the wholesale trade industry will experience no new net growth during 1988 and 1989 because various sectors within the industry will be expanding at the same time that other industries are declining. A similar employment forecast is suggested for the transportation, communications, and public utilities industries. At mid-decade, many industrial divisions within this broad classification were consolidating and expanding their trade areas as the rate of growth in new housing construction and heavy (energy industry related) construction declined. During the same period, deregulation permitted the application of higher technologies and the withdrawal of services from less profitable geographic regions. Employment in the communications industry declined by one hundred jobs in each year since 1985, to 3,200 jobs in 1987. Employment in the utilities industry dropped a little more quickly over the same period, averaging 4,800 jobs in 1987. Employment loss in these two industries was associated with a period of deregulation and decreasing activity in the goods-producing sectors directly served by them. Most of the downward adjustment in employment in the communications and utilities industries appears to have been completed by 1987.

The withdrawal of railroad branch lines from rural areas still left those areas with transportation needs. And many of those needs have been met through expansion of the trucking and warehousing industry. The volume of agricultural commodities destined for export is forecast to grow over the balance of the decade. In addition, expansion in the oil and gas extraction industry is expected to gather strength towards the later part of the forecast period. Drilling activity is supported by several well-site delivered inputs to the drilling process and positively affects trucking industry employment. Employment in transportation is expected to grow rapidly enough over the forecast period to result in total employment in the broader aggregate of transportation, communications, and public utility industry to rise to 16,100 jobs (from 16,000 jobs) by 1989.

In 1987, all of the net employment growth in the state was found in the services-producing sector. Over the balance of the decade, the bulk of net new employment is also forecast to be found among these industries. Most employment in services-producing industries is "driven" by population and personal income factors. Employment in population-sensitive industries tends to gravitate towards more urban settings. Services-producing industries, whose employment is "driven" by overall activity in goods-producing industries, tends more often to be found among rural areas, near the natural resources they depend upon. In 1984, 14.5 percent of all nonagricultural wage and salary jobs were found in goods-producing industries -- firms dominated by occupations with middle-range earnings. By 1989, employment in goods-producing industries is projected to drop to 12.1 percent of all wage and salary jobs with 87.9 percent of the employment found in services-producing industries. Occupations in services-producing industries tend more often to be divided between comparatively high earnings and comparatively low earnings positions. This trend, in turn, has implications for continued growth in the number of two-earner families and subsequent consumption patterns.

VIII. POPULATION AND LABOR FORCE

Several processes have been shaping the character of North Dakota's population and labor force since the beginning of the decade (see Appendix II for labor force data):

- The proportion of the total adult population either working or looking for work has increased substantially.
- Women hold a growing share of jobs in North Dakota.
- The number of youth available to enter the labor force has sharply decreased.
- There has been an increase in the economic pressure for rural to urban migration.
- Out-migration.
- The labor force is becoming more middle-aged.

The proportion of North Dakota's adult civilian population either working or looking for work (the labor force participation rate) now exceeds the national average. Nationally, the labor force participation rate for males has tended to decline. From 1980 to 1986, the national participation rate for males decreased from 77.4 percent to 76.3 percent. (Data -- Geographic Profiles 1980 and 1986) Participation rates for males in North Dakota, on the other hand, have tended to remain marginally higher and run contrary to national trends. Between 1980 and 1986, the participation rate for males stayed virtually the same. The proportion of all civilian males in North Dakota, aged 16 or more, stood at 78.6 percent at the beginning of the decade and remained at 78.9 percent in 1986.

Nationally, in contrast to males, the proportion of all civilian women age 16 or more in the labor force grew quickly to 55.3 percent between 1980 and 1986. At the beginning of the decade, both nationally and in the state, participation rates were quite similar with 51.6 percent and 51.7 percent respectively. But by 1986, the participation rate for females in North Dakota had shot up to 58.9 percent. As a consequence, largely of increased female participation in the labor force, a greater share of the state's civilian population is in the labor force than is the case in the nation as a whole.

As a result of increased employment, the female share of all individuals employed in the state rose from 38.2 to 43.9 percent of all job holders between the beginning of the decade and 1986. (Data -- Geographic Profiles 1980 & 1986) If the rate of growth in female employment is extended from 1986 to the end of the decade, females will be responsible for 47.7 percent of all job holding in North Dakota by 1990. In some of the communities surveyed under Job Service's Community Employment Survey program (summary data are found in Table 12), more than half of the jobs in certain major trade centers are held by females.

Increased female participation in the labor force has taken place at a time when the number of youth available to enter the labor market has decreased substantially. Population data, presented in appendix Table 1, indicates how the maturing of the baby boom generation is projected to affect the availability of youth in North Dakota's labor force. In comparison to Census Bureau counts in 1980 (and projections based on historic data for 1970 to 1980), the decrease in the number of individuals 16 to 24 years-of-age was projected at -5,570 persons. However, the scale of change in the number of available youth may be even greater than these projections suggest.

Analysis of head count enrollment data for grades 1 through 12 provides one opportunity to develop an understanding of current (as opposed to projected) population trends. The data in Table 16 indicates, on a statewide basis, that the decrease in the number of students available for employment has been substantial. From the beginning of the decade to the 1987-88 school year, the number of junior and senior high school students decreased by 16.5 percent. For age groups most likely to seek work, those found in grades 11 and 12, the decrease in enrollment was even greater at -18.0 and -18.4 percent respectively. The

Table 16
Head Count Enrollment by Grade for North Dakota
1980-81 and 1987-88 School Years

	80-81	87-88	1980-88 Change	
Grade	N	N	N	%
1	10,173	11,578	1,405	13.8
2	9,876	10,753	877	8.9
3	9,852	10,245	393	4.0
4	10,127	10,093	-34	-0.3
5	10,331	9,904	-427	-4.1
6	9,609	9,340	-269	-2.8
7	9,528	9,276	-252	-2.6
8	9,964	9,108	-856	-8.6
9	10,528	9,209	-1,319	-12.5
10	10,880	9,061	-1,819	-16.7
11	11,128	9,122	-2,006	-18.0
12	11,309	9,233	-2,076	-18.4
Total	**123,305**	**116,922**	**-6,383**	**-5.2**

SOURCE: Department of Public Instruction "Enrollment and Teachers Report" (Printout P13-030-AA) decreasing availability of youth for employment appears likely to have created an opportunity for more mature females in North Dakota to find employment.

Lichter and Costanzo's (1987) review of the literature suggests that there are several additional factors associated with increased female participation in the labor force. Nationally, current estimates indicate that more than half of the women with children under the age of 18 are in the labor force. Historic factors associated with an increasing share of the female population entering the labor force are related to the growth in divorce rates, smaller family size, delayed child bearing and childlessness, and an increase in the number of individuals delaying or never marrying. These demographic factors may serve to permit or create the need for greater female participation in the labor force.

But there are also economic and social factors contributing to increased participation in the labor force. Employment away from home may not only be perceived as a more desirable state of affairs, it may also represent the most efficient use of human capital. "Increasing educational attainment alters the relative importance of home work versus the labor market for many women." (Lichter and Costanzo 1987: 23) National trends in demographics and society, as a whole, makes labor force participation less difficult for females while, at the same time, social change and education facilitate job holding. In addition, new living arrangements frequently establish a need for financial self-support.

In North Dakota, however, there appears to be additional, primarily economic factors leading to greater female participation in the labor force. On the demand side, employment growth has been greatest among industries dominated by females.

Goods-producing industries, such as mining and construction, are male-dominated industries, while females dominate many expanding services-producing industries. The data in appendix

Table 14,[1] for example, reveals that employment in the personal services industry is over 80 percent female, and in professional and related industries, over 68.3 percent of the employment is female. On the other hand, in the declining construction industry, over 90 percent of the employment is male. With earnings in the construction industry falling or remaining constant between 1984 and 1986 (see appendix Table 24), even females in families with an employed construction worker have an added incentive to seek work maintenance of the family's purchasing power. In addition to the factors identified by national research, as being associated with female participation in the labor force, falling wages, farm earnings which have failed to keep pace with the rate of inflation, or job loss in industries dominated by males, may act as incentives and account for the higher female participation rate in North Dakota. At the same time that North Dakota's economy has provided the incentive for women to work, industries typically employing large numbers of women have been expanding. Higher labor market participation rates in North Dakota may represent a family labor market strategy developed in response to the falling real earnings capacity of the average job, or joblessness of the principle wage earner.

But high participation rates may also signal the loss of population. Individuals without jobs may have withdrawn from the labor market by leaving the state. Those who remain either have a job, the strong prospect of gaining one, or are tied to a particular location for other reasons. As those without employment leave, the proportion of individuals with strong attachment to the labor market increases.

North Dakota's unemployment rate dropped precipitously from

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[1] The data presented in Table 14, unlike the annual average Current Population Survey data discussed in preceding paragraphs, represents responses to 1980 Census survey questions which were asked in the spring of the year. Data in Table 14, then, are subject to seasonal conditions.

6.3 percent in 1986, to 5.2 percent in 1987.[2] Even though net employment increased by 1,300 jobs over the period (see Table 14), and job opportunities became available due to the need for replacement workers, dislocation in the labor market still appears problematic for workers with skills in low demand. The mismatch between skills continues, for example, in the mining and agricultural industries, and slow net job growth by itself is insufficient to drive the unemployment rate down by 1.1 percent from 1986 to 1987.[3] In effect, it appears that many of those without jobs have left the state.[4]

One estimate suggests that net migration from the state, from 1985 to 1986, stood at 5,745 persons.[5] Given the historic ease and pace with which population in the Plains states has migrated, however, additional data can yield a more current insight into population movement and labor force trends. Enrollment data in Table 16 reveals, for example, that the cohort enrolled in the first grade during the 1980-81 school year decreased by 10.5 percent (-1,065 students) by the time it reached the 8th grade in the 1987-88 school year. Assuming a constant rate of replacement (for individuals held back) from the preceding grade of comparable size, and some adjustment for normal mortality, it would appear that most of the loss is due to out-migration. These data can be used to assess more recent trends in migration and establish a base line for substate analysis.[6]

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[2] Data -- 1987I Bench Mark, NDRS31d (2/88).

[3] Recently, there have been suggestions that job opportunities in rural areas have gone unfilled because out-migration has meant that females, who traditionally hold these jobs, have left with their families -- creating additional dislocation in the labor market particularly in the services-producing sector.

[4] One of the principle limitations of interpreting the unemployment rate at the state and local level, especially in highly mobile and/or low population density areas, is that it may reflect population movement as often as labor market conditions.

[5] "Estimated Population and Migration Rate for North Dakota, 1985-86," Population Bulletin Series, Vol. 3, No. 7 (7/87), Census Data Center/North Dakota State University.

The fact that enrollment from middle-grade cohorts decreased is a strong indication that families headed by individuals from the boom generation have left the state. The most likely candidates for family outmigration, based on the age of the mother at first birth, and the grade level of reduced enrollment in the 1987-88 school year, are households headed by individuals in their late twenties and early thirties. But this may not have been the case earlier in the decade. A period of intensified utilization of Job Insurance weekly benefits followed the sharp fall in employment in the mining industry from 1982 to 1983. As Job Insurance benefits began expiring, participation in the food stamp program escalated rapidly (see Figure 6, and Appendix V for tabular data). But by the winter of 1983-84, food stamp participation dropped dramatically. Given that most employees in the mining industry are young, and therefore highly mobile (see appendix Table 14), and employment in the mining (as well as several other industries) industry showed little sign of growth in 1984, it seems reasonable to suggest that 1984 represented a period of extensive out-migration.

Employment in the construction industry collapsed in 1984 as projects in the energy industry were completed. Job Insurance covered employment fell from 17,356 jobs in 1983 to 13,708 jobs in 1984 (see appendix Tables 18 and 19). Early 1984 began a second period of extensive reliance on food stamps in response to extended periods of joblessness and the failure of earnings in many industries to keep pace with the rate of inflation.[7] For 31

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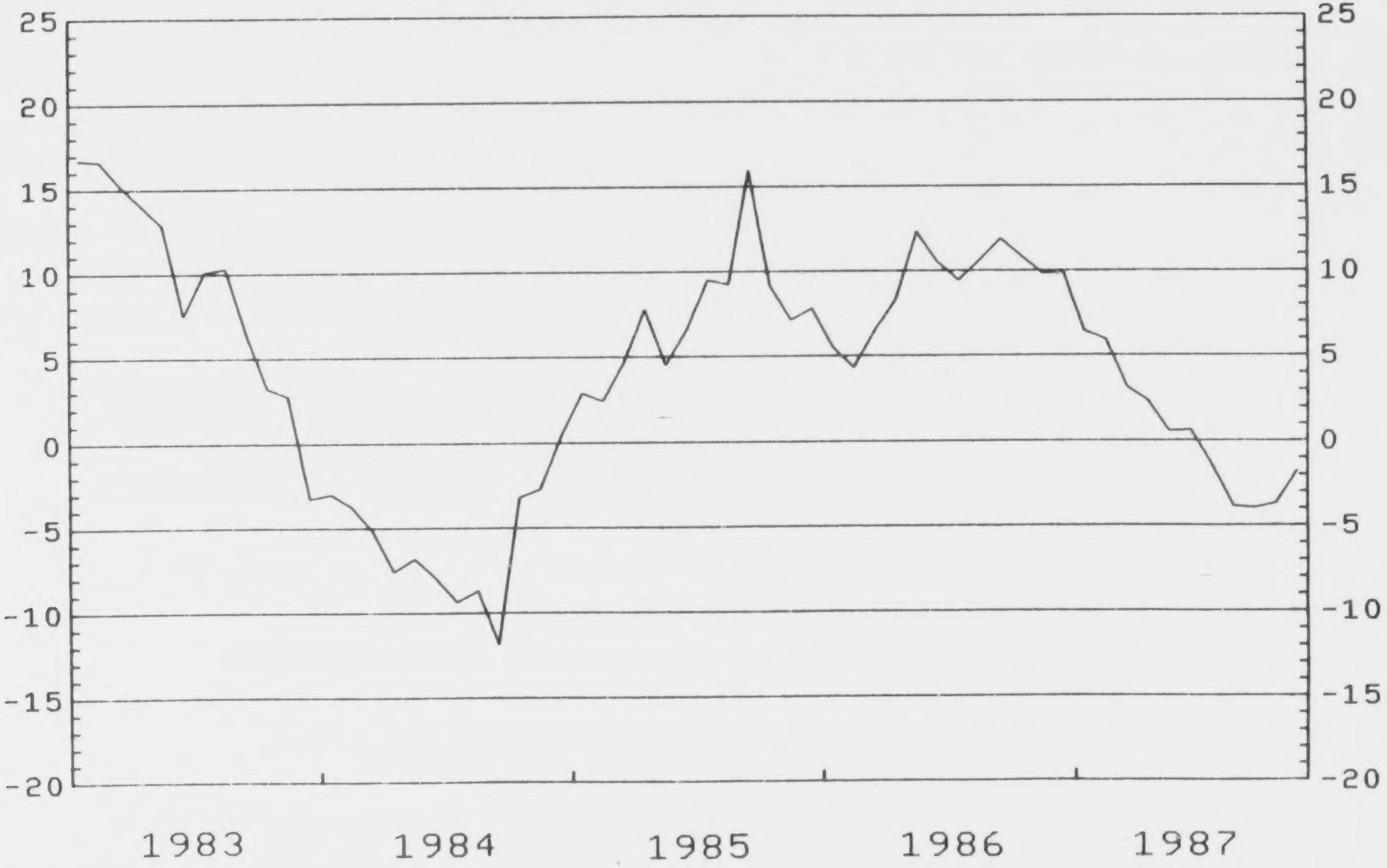
[6] Total and upper grade enrollment data by county are provided in Appendix I. In 1980, 52.2 percent of the states 168,418 families had children under the age of 18. The 87,919 families had a total of 179,845 children under the age of 18, or 2.046 children per family.

[7] Average earnings per job (appendix Table 24) failed to keep pace with the rate of inflation (text Table 4) during 1985 and 1986. On the other hand, food stamps eligibility is increased each year on the basis of the Consumer Price Index. Structurally, what this means is that job holding by itself, let alone an extended period without employment, is much more likely

Figure 6

Number of Food Stamp Participants;
Percent Change from One Year Ago
1983 - 1987



consecutive months, from December 1984 to June of 1987, food stamp utilization demonstrated increased utilization when compared to the same period one year ago. In the summer of 1987, food stamp utilization fell. With certain industries showing job growth during the midsummer of 1987, some food stamp utilization decrease would appear to be due to improved state labor market conditions, rather than representing the beginnings of a second acceleration in out-migration. But in order to take advantage of that improvement, many individuals and families have had to move from more rural and western areas of the state to take advantage of more urban and eastern job opportunities.

Head count enrollment data can be used to assess current population migration activities within the state. Summarizing the data in Table 16 into three broad classifications reveals that: (A) the number of individuals in grades 9-12 decreased by 16.5 percent from the 1980-81 to 1987-88 school year, (B) the number of individuals in grades 4-8 (frequently the grouping containing the first offspring of the baby boom generation) decreased by 3.9 percent statewide, and (C) the number of individuals in grades 1-3 (often containing the second offspring of the baby boom generation and the first offspring of those who have delayed child birth) increased by 8.9 percent. These percent changes, then, become the norm, or base line for the analysis of substate migration.

The data in Table 17, reveals how population change for families has taken place in two of the State's Planning Regions from the 1980-81 to 1987-88 school year. Enrollment for grades 1-3 in both major counties of each region grew much faster, at 12.4 percent in Grand Forks and 11.9 percent in Stutsman County, than it did statewide or in the balance of each region. The net loss in the balance of each region's rural counties exceeds state-wide averages. The higher rate of loss in rural counties indicates the extent of population loss for families with young children. (Figure 7 illustrates the rate of change for each

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to permit one to become eligible for food stamps than had average earnings kept pace with the rate of inflation.

FIGURE 7

PERSONS ENROLLED IN GRADES 1-12 BY COUNTY AND SCHOOL YEAR 1980/81-1987/88: PERCENT CHANGE

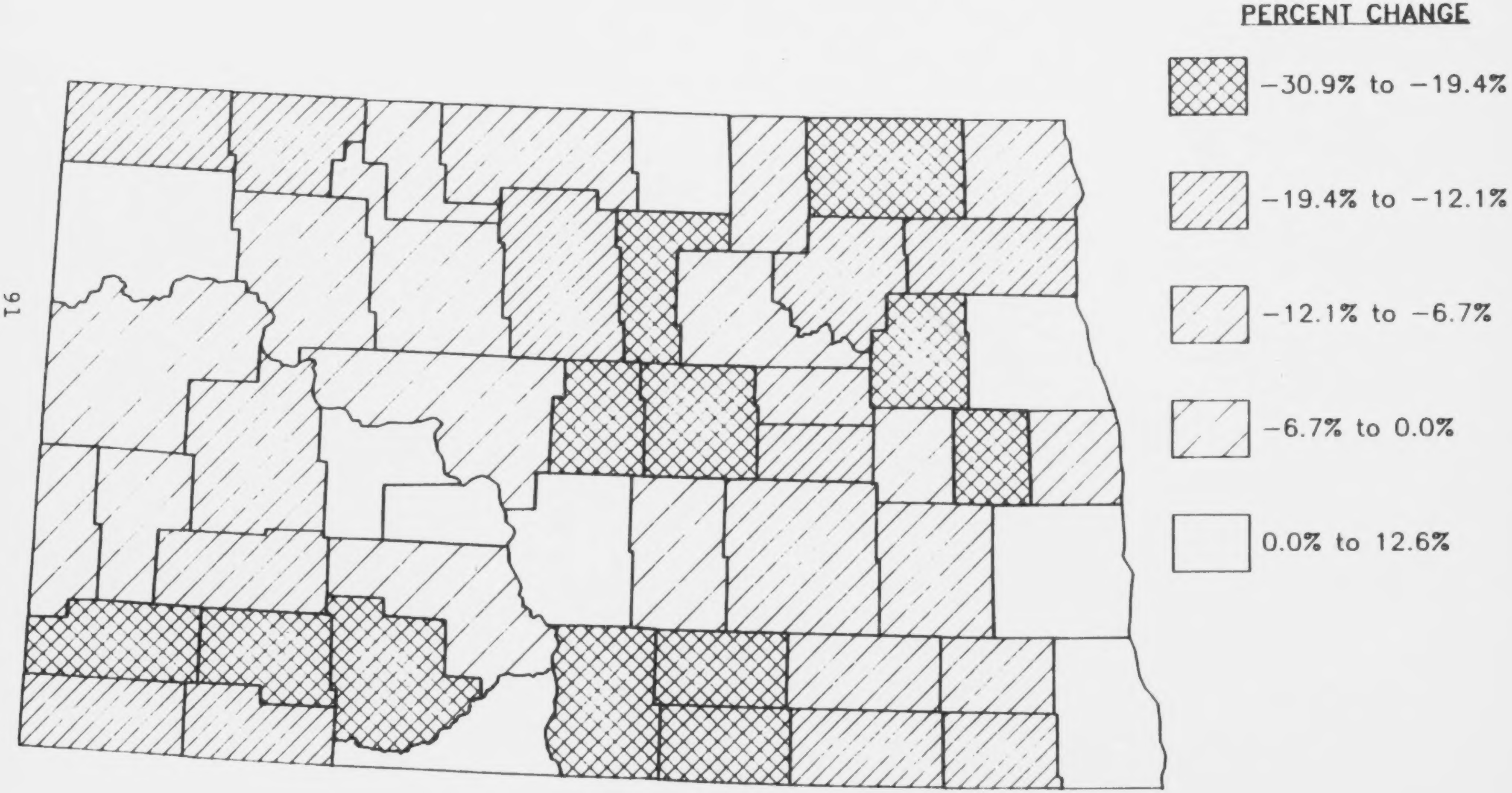


Table 17
Head Count Enrollment by Grade for Regions IV and VI for 1980-81 and 1987-88 School Years

Region IV

Grades	Grand Forks County				Balance of Region				Total			
	School Year				School Year				School Year			
	1980-81	1987-88	Change		1980-81	1987-88	Change		1980-81	1987-88	Change	
	N	N	N	%	N	N	N	%	N	N	N	%
1-3	2,874	3,230	356	12.4	1,305	1,405	100	7.7	4,179	4,635	456	10.9
4-8	4,364	4,481	117	2.7	2,338	2,127	-211	-9.0	6,702	6,608	-94	-1.4
9-12	3,271	3,176	-95	-2.9	2,500	1,652	-848	-33.9	5,771	4,828	-943	-16.3
Total	**10,509**	**10,887**	**378**	**3.6**	**6,143**	**5,184**	**-959**	**-15.6**	**16,652**	**16,071**	**-581**	**-3.5**

Region VI

Grades	Stutsman County				Balance of Region				Total			
	School Year				School Year				School Year			
	1980-81	1987-88	Change		1980-81	1987-88	Change		1980-81	1987-88	Change	
	N	N	N	%	N	N	N	%	N	N	N	%
1-3	1,043	1,167	124	11.9	2,115	2,129	14	0.7	3,158	3,296	138	4.4
4-8	1,750	1,570	-180	-10.3	3,708	3,151	-557	-15.0	5,458	4,721	-737	-13.5
9-12	1,462	1,179	-283	-19.4	3,687	2,777	-910	-24.7	5,149	3,956	-1,193	-23.2
Total	**4,255**	**3,916**	**-339**	**-8.0**	**9,510**	**8,057**	**-1,453**	**-15.3**	**13,765**	**11,973**	**-1,792**	**-13.0**

Source: Department of Public Instruction, "Enrollment and Teachers Report" (Printout PI3-030-AA)

county's total head count enrollment.) The relatively greater loss of total enrollment in Stutsman County, as compared to the state as a whole, also indicates that regional trade centers outside the Red River Valley are not immune to population loss (see Map 2 in Appendix VI).

Grand Forks County's 3.6 percent total increase in school-age population is also suggestive of the relationship between greater economic resilience in the employment growth centers of eastern North Dakota and population growth. The mere 2.9 percent loss for grades 9-12 in Grand Forks County, as compared to 33.9 percent and 24.7 percent loss in the more sparsely populated balance of Regions IV and VI, suggests that the labor shortage created by the statewide decline in the number of youth may be a rural, and more western phenomenon, rather than a statewide labor market issue.

New job opportunities are increasingly found in more urbanized settings. In 1986, for example, 77.3 percent (n=5,834) of the jobs in the growing services industry in Region IV were found in Grand Forks County, the county with the trade area's major trading center.

In addition to job opportunities, average earnings in urban trade centers (illustrated in Figure 8) tend to be higher than in more rural counties. Average monthly Job Insurance covered earnings are as much as 24 to 47.6 percent less than the state average in 12, primarily rural, counties (tabular data are found in Appendix IV). A combination of comparatively low average earnings opportunities in rural areas, and job growth in more urbanized settings, creates an additional inducement for migration from less populated counties to urbanized areas in the state.

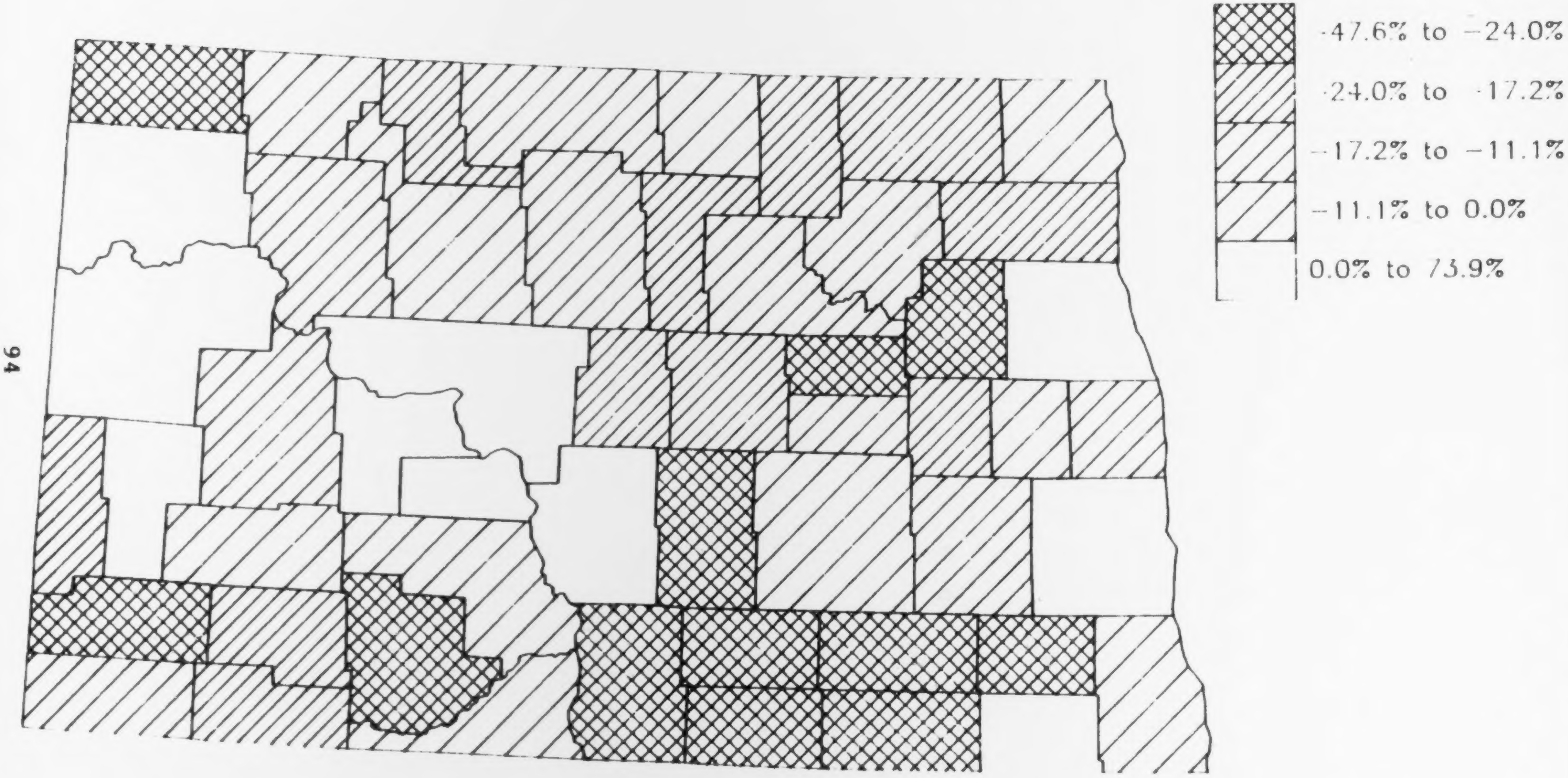
Economic need and job growth limited to industries dominated by females may explain the higher level of female participation in the labor force. But participation rates also climb as individuals reach middle age, and taper off as labor force participants reach traditional retirement age.

North Dakota's labor force is maturing for two reasons:

FIGURE 8

COUNTY EARNINGS AS A % OF STATE EARNINGS

1986 STATE AVERAGE EARNINGS ($1314/MONTH=100%)



First, the baby boom generation is aging. In 1980, the baby boom generation (individuals born between 1947 and 1964) were between the ages of 16 and 33. By 1988, projections indicate, the baby boom generation will have inflated the age grouping of 25-44 year-olds to 31.4 percent, up from 25.7 percent in 1980, of the state's total population (see appendix Table 1). By 1990, the boom generation will be aged 26 to 43. Secondly, it appears that many middle-aged members of the boom generation, who formed families and had children, have left. And younger members of the boom generation, unable to establish themselves in a sluggish labor market, seem more likely still to follow historic precedent and search elsewhere for employment. This suggests that the older one-third of the baby boom generation is the dominant factor in North Dakota's labor market.

A maturing labor force (individuals in their late 30s and early 40s) has a different outlook and set of expectations about the labor market than these same individuals had at the beginning of the decade. The data in appendix Table 14 indicates that in 1980, individuals in the age groupings of 16-34 were over-represented (relative to their employment as a whole) in mining, construction, and manufacturing industries, in retail trade, and in business and repair service industries. Jobs in many of these industries have gone through a period of growth and then disappeared in mid-decade. Those of the boom generation who have remained in the state may be closing the decade with greater expectations for employment stability.

Goods-producing industries, retail trade, and business and repair services are industries characterized by wage and salary employment. Agriculture, however, is an industry in which employment is largely limited to self-employment (see appendix Table 23), and at the beginning of the decade, contrasted sharply with other industries in the age structure of its workers. The data in appendix Table 14 reveals that 20 percent of the employment in agriculture was among individuals ages 45-54 in 1980, in comparison to 15.1 percent in the state as whole. More mature individuals (aged 55+) played a far greater role in agricultural employment than they did in any other industry.

The greater involvement of more mature individuals in agriculture is quite probably a function of the ownership of farm property. The maturing of the state's agricultural labor force will put many farm operators at traditional retirement age near the end of the decade. Extended uncertainty over agricultural property values is likely to make the intergenerational transfer of property for large numbers of families difficult. Because the viability of farming as an enterprise is tentative, especially where farm earnings are to be used to support both the new operator's and the retired operator's families, new farm operators may be less willing to become involved in farming. Finally, retirement for farm operators often means resettlement away from the farm operation, further contributing to population decline in the state's rural areas.

The agricultural labor force, in comparison to wage and salary workers in other industries, tends to be older. The maturing of this labor force will bring a large number of farm operators near retirement age between now and the end of the decade. In contrast to the mid-decade loss of farm operations, there would appear to be additional demographic conditions present to increase the rate of farm operator retirement and potentially add to the rate of farm loss. Retirement has often been associated either with out-migration, or relocation within the state to take advantage of trade center services. In addition to economic incentive to move to urban areas and disincentives to remain in rural areas, demographic change will contribute to the urbanization of North Dakota's population and labor force. These processes, in turn, will make it increasingly difficult for rural firms to fill those comparatively few job openings which do arise. Indeed, filling rural job openings between now and the end of the decade would seem to be made even more difficult as families with older children abandon rural areas and contribute to a growing shortage of youth created by a maturing baby boom generation.

Finally, during the remainder of the decade, employment opportunities are likely to be found in industries which have traditionally been more urbanized and which have hired females. Moreover, the low personal income growth rate anticipated for the forecast period, and rising inflation, will serve to maintain the structural pressure on households to field as many wage earners as possible. Participation rates are expected to remain high in comparison to national standards.

APPENDIX I

POPULATION

Table 1
Population Projections by Age for North Dakota*

	1980		1985		1987		1988		1985-88 Change	
Age	N	%	N	%	N	%	N	%	N	%
0-15	167,620	25.7	171,790	25.6	175,100	25.8	175,960	25.8	4,170	2.4
16-24	120,520	18.5	100,260	14.9	95,800	14.1	94,690	13.9	-5,570	-5.6
25-44	167,800	25.7	203,260	30.3	211,900	31.2	214,200	31.4	10,940	5.4
45-64	116,310	17.8	111,450	16.6	111,530	16.4	111,560	16.4	110	0.1
≥65	80,450	12.3	84,470	12.6	84,800	12.5	84,860	12.5	390	0.5
Total	**652,700**	**100.0**	**671,230**	**100.0**	**679,130**	**100.0**	**681,270**	**100.0**	**10,040**	**1.5**

*These projections assume 1970-80 death rates and 1975-80 birth rates. Given the slow growth in the number of jobs since 1980, they are also somewhat optimistic in that they are also based on 1970-80 migration rates.

Table 2
Persons Enrolled in Grades 1-12 for Urban and Rural Portions of North Dakota by School Year 1980-1986

	School Year						1980-81 to 1985-86 Change	
	80-81	81-82	82-83	83-84	84-85	85-86	N	%
Urban Counties*	69,326	68,766	68,134	68,023	68,046	68,236	-1,090	-1.6
Rural Counties	53,979	52,496	51,323	50,977	50,185	49,205	-4,774	-8.8
SNG**	5,017	5,012	5,137	5,574	5,426	5,251	234	4.7
Other	48,962	47,484	46,186	45,403	44,759	43,954	-5,008	-10.2
Total	**123,305**	**121,262**	**119,457**	**119,000**	**118,231**	**117,441**	**-5,864**	**-4.8**

* For purposes of this analysis, urban counties include Williams, Ward, Ramsey, Grand Forks, Cass, Stutsman, Burleigh, Morton, and Stark.

** Synthetic Natural Gas (SNG) counties include those rural counties strongly affected by power plant construction--McLean, Mercer, Oliver.

SOURCE: Department of Public Instruction, "Enrollment and Teachers Report" (printout PI3-030-AA)

Table 3
Current Population Estimates of the Civilian Non-Institutional Population of North Dakota by Age for Persons 16 and Over
(In Thousands)

Age	1980		1985		% Change
	N	%	N	%	
16-19	45.3	9.5	42.0	8.6	-7.3
20-24	64.0	13.5	56.0	11.5	-12.0
25-34	105.2	22.1	125.0	25.6	18.8
35-44	62.0	13.1	75.0	15.4	21.0
45-54	59.3	12.5	55.0	11.3	-7.3
55-64	63.1	13.3	62.0	12.7	-1.7
65+	76.1	16.0	73.0	14.9	-4.1
Total	**475.0**	**100.0**	**488.0**	**100.0**	**2.7**

Table 4
Enrollment in Grades 7-12 for the 1987-88 School Year

	7th	8th	9th	10th	11th	12th	Total
REGION I							
Williams	364	339	333	323	310	329	1,998
Divide	24	31	27	23	39	43	187
McKenzie	112	133	108	100	77	99	629
TOTAL	**500**	**503**	**468**	**446**	**426**	**471**	**2,814**
REGION II							
Ward	831	834	809	814	783	761	4,832
Bottineau	123	128	134	138	130	136	789
Burke	54	54	53	56	56	56	329
McHenry	105	115	119	109	108	117	673
Mountrail	137	124	139	118	131	120	769
Pierce	64	74	83	69	82	92	464
Renville	67	69	63	58	65	59	381
TOTAL	**1,381**	**1,398**	**1,400**	**1,362**	**1,355**	**1,341**	**8,237**
REGION III							
Ramsey	191	174	202	193	198	204	1,162
Benson	118	109	117	115	96	101	656
Cavalier	89	85	81	95	98	93	541
Towner	49	45	49	47	52	62	304
Eddy	49	39	53	41	44	41	267
Rolette	244	228	219	218	190	210	1,309
TOTAL	**740**	**680**	**721**	**709**	**678**	**711**	**4,239**
REGION IV							
Grand Forks	856	804	793	820	807	756	4,836
Nelson	60	63	68	67	67	83	408
Walsh	172	157	181	189	206	209	1,114
Pembina	172	169	153	153	143	133	923
TOTAL	**1,260**	**1,193**	**1,195**	**1,229**	**1,223**	**1,181**	**7,281**
REGION V							
Cass	1,247	1,182	1,265	1,271	1,267	1,293	7,525
Traill	125	122	126	141	123	135	772
Steele	22	29	25	34	24	31	165
Ransom	96	102	96	74	95	121	584
Richland	298	327	211	227	220	208	1,491
Sargent	67	71	66	70	86	76	436
TOTAL	**1,855**	**1,833**	**1,789**	**1,817**	**1,815**	**1,864**	**10,973**
REGION VI							
Stutsman	304	298	300	280	303	296	1,781
Wells	87	82	84	98	102	102	555
McIntosh	46	50	55	51	61	76	339
Logan	42	36	56	42	52	49	277
Foster	65	64	83	64	92	74	442
Dickey	104	84	86	105	95	103	577
LaMoure	103	88	95	92	93	106	577
Barnes	137	157	176	165	169	176	980
Griggs	39	48	42	40	49	44	262
TOTAL	**927**	**907**	**977**	**937**	**1,016**	**1,026**	**5,790**
REGION VII							
Burleigh	882	815	849	810	884	835	5,075
McLean	201	212	222	188	207	201	1,231
Sheridan	19	23	18	28	21	40	149
Kidder	58	60	65	48	39	69	339
Emmons	75	82	70	83	99	111	520
Morton	442	413	443	378	403	420	2,499
Mercer	154	164	155	159	164	148	944
Oliver	30	42	36	40	28	26	202
Grant	42	58	50	61	50	49	310
Sioux	73	82	86	104	68	62	475
TOTAL	**1,976**	**1,951**	**1,994**	**1,899**	**1,963**	**1,961**	**11,744**
REGION VIII							
Stark	390	366	368	368	325	367	2,184
Slope	6	6	0	0	0	0	12
Hettinger	45	61	72	79	86	101	444
Golden Valley	36	41	49	53	43	39	261
Dunn	41	49	53	50	50	58	301
Bowman	54	62	79	66	92	66	429
Billings	9	18	0	0	0	0	27
Adams	46	40	44	46	50	47	273
TOTAL	**637**	**643**	**665**	**662**	**646**	**678**	**3,931**
STATE TOTAL	**9,276**	**9,108**	**9,209**	**9,061**	**9,122**	**9,233**	**55,009**

SOURCE: Department of Public Instruction, "Enrollment and Teachers Report" (printout PI3-030-AA)

Table 5
Persons Enrolled in Grades 1-12 by County and School Year 1980-1988

	80-81	81-82	82-83	83-84	84-85	85-86	86-87	87-88
REGION I								
Williams	4,361	4,786	4,929	4,838	4,947	4,897	4,612	4,417
Divide	488	490	488	469	453	464	443	429
McKenzie	1,357	1,514	1,521	1,480	1,503	1,483	1,364	1,350
TOTAL	**6,206**	**6,790**	**6,938**	**6,787**	**6,903**	**6,844**	**6,419**	**6,196**
REGION II								
Ward	11,166	10,994	10,674	10,728	10,564	10,602	10,634	10,554
Bottineau	1,771	1,782	1,763	1,694	1,694	1,645	1,592	1,573
Burke	744	762	742	701	695	701	662	640
McHenry	1,644	1,590	1,549	1,516	1,460	1,420	1,398	1,349
Mountrail	1,634	1,640	1,592	1,611	1,628	1,556	1,592	1,616
Pierce	1,260	1,189	1,125	1,108	1,060	1,027	1,007	987
Renville	804	780	768	743	752	744	743	751
TOTAL	**19,023**	**18,737**	**18,213**	**18,101**	**17,853**	**17,695**	**17,628**	**17,470**
REGION III								
Ramsey	2,936	2,728	2,662	2,393	2,364	2,377	2,405	2,463
Benson	1,472	1,456	1,414	1,559	1,519	1,436	1,420	1,405
Cavalier	1,444	1,338	1,244	1,190	1,156	1,104	1,102	1,101
Towner	719	688	679	701	683	644	619	644
Eddy	601	590	564	549	582	579	550	557
Rolette	3,026	3,083	2,997	3,042	2,953	2,931	3,023	3,080
TOTAL	**10,198**	**9,883**	**9,560**	**9,434**	**9,257**	**9,071**	**9,119**	**9,250**
REGION IV								
Grand Forks	10,509	10,357	10,275	10,276	10,305	10,389	10,630	10,887
Nelson	1,128	1,059	1,013	978	945	914	890	843
Walsh	2,888	2,593	2,530	2,486	2,497	2,437	2,424	2,357
Pembina	2,127	2,096	2,026	1,923	1,909	1,928	1,943	1,984
TOTAL	**16,652**	**16,105**	**15,844**	**15,663**	**15,656**	**15,668**	**15,887**	**16,071**
REGION V								
Cass	14,953	14,743	14,642	14,786	14,966	15,237	15,419	15,798
Traill	1,781	1,690	1,674	1,646	1,687	1,656	1,673	1,617
Steele	485	449	417	408	401	367	372	355
Ransom	1,288	1,220	1,195	1,180	1,165	1,155	1,174	1,179
Richland	3,179	3,080	3,083	3,068	3,114	3,141	3,233	3,253
Sargent	1,031	981	962	929	907	907	877	856
TOTAL	**22,717**	**22,163**	**21,973**	**22,017**	**22,240**	**22,463**	**22,748**	**23,058**
REGION VI								
Stutsman	4,255	4,128	3,972	3,995	3,953	3,911	3,939	3,916
Wells	1,390	1,286	1,228	1,196	1,160	1,145	1,100	1,087
McIntosh	916	831	798	750	739	694	662	670
Logan	685	648	624	589	563	555	533	512
Foster	993	1,028	991	965	920	869	843	833
Dickey	1,346	1,283	1,207	1,226	1,219	1,219	1,194	1,174
LaMoure	1,305	1,258	1,231	1,172	1,162	1,152	1,155	1,160
Barnes	2,312	2,225	2,164	2,136	2,083	2,114	2,091	2,066
Griggs	563	576	551	567	554	560	575	555
TOTAL	**13,765**	**13,263**	**12,766**	**12,596**	**12,353**	**12,219**	**12,092**	**11,973**
REGION VII								
Burleigh	10,489	10,356	10,257	10,386	10,518	10,566	10,708	10,677
McLean	2,749	2,768	2,763	2,868	2,707	2,626	2,588	2,596
Sheridan	368	343	330	310	309	303	282	273
Kidder	742	709	695	670	656	666	691	694
Emmons	1,347	1,299	1,194	1,139	1,094	1,024	965	931
Morton	5,510	5,381	5,451	5,533	5,422	5,339	5,228	5,228
Mercer	1,823	1,799	1,943	2,254	2,277	2,195	2,069	2,053
Oliver	445	445	431	452	422	430	432	454
Grant	829	796	778	751	756	699	682	613
Sioux	1,024	999	956	940	938	960	1,031	1,028
TOTAL	**25,326**	**24,895**	**24,798**	**25,303**	**25,099**	**24,808**	**24,676**	**24,547**
REGION VIII								
Stark	5,147	5,293	5,272	5,088	5,007	4,918	4,834	4,769
Slope	67	61	75	63	56	60	57	54
Hettinger	1,173	1,107	1,047	1,001	968	888	872	822
Golden Valley	528	518	543	529	505	501	523	496
Dunn	757	770	785	797	765	727	691	699
Bowman	985	940	920	918	898	904	863	851
Billings	110	121	112	109	102	97	102	109
Adams	651	616	611	594	569	578	565	557
TOTAL	**9,418**	**9,426**	**9,365**	**9,099**	**8,870**	**8,673**	**8,507**	**8,357**
STATE TOTAL	**123,305**	**121,262**	**119,457**	**119,000**	**118,231**	**117,441**	**117,076**	**116,922**

SOURCE: Department of Public Instruction, "Enrollment and Teachers Report" (printout PI3-030-AA)

Table 6
Population by Age, Sex, and County, 1980
Both Sexes

	0-4	5-15	16-19	20-24	25-29	30-44	45-64	65>	Total	
									Number	Percent
REGION I										
Williams	2,007	3,759	1,817	2,451	2,188	3,748	3,846	2,421	22,237	
Divide	243	524	222	186	199	529	986	705	3,494	
McKenzie	567	1,436	530	637	612	1,226	1,280	744	7,132	
TOTAL	**2,917**	**5,719**	**2,569**	**3,274**	**2,999**	**5,503**	**6,012**	**3,870**	**32,862**	
ROW PERCENT	8.9	17.4	7.8	10.0	9.1	16.7	18.3	11.8		100.0
REGION II										
Ward	5,579	10,332	4,637	7,718	5,969	10,395	8,459	5,267	58,392	
Bottineau	710	1,548	737	687	584	1,532	1,820	1,621	9,239	
Burke	247	659	229	207	208	584	951	737	3,822	
McHenry	575	1,387	569	465	515	1,200	1,699	1,448	7,858	
Mountrail	660	1,421	524	510	563	1,201	1,618	1,182	7,679	
Pierce	442	1,190	496	426	380	931	1,187	1,114	6,166	
Renville	250	698	239	208	241	608	736	628	3,608	
TOTAL	**8,463**	**17,235**	**7,431**	**10,221**	**8,460**	**16,451**	**16,506**	**11,997**	**96,764**	
ROW PERCENT	8.7	17.8	7.7	10.6	8.7	17.0	17.1	12.4		100.0
REGION III										
Ramsey	994	2,215	1,127	1,044	987	2,065	2,530	2,086	13,048	
Benson	784	1,702	588	554	512	1,147	1,481	1,176	7,944	
Cavalier	560	1,350	582	473	515	1,201	1,653	1,302	7,636	
Towner	285	660	279	278	248	585	915	802	4,052	
Eddy	280	544	239	230	241	494	797	729	3,554	
Rolette	1,385	2,862	1,130	965	874	1,861	1,959	1,141	12,177	
TOTAL	**4,288**	**9,333**	**3,945**	**3,544**	**3,377**	**7,353**	**9,335**	**7,236**	**48,411**	
ROW PERCENT	8.9	19.3	8.1	7.3	7.0	15.2	19.3	14.9		100.0
REGION IV										
Grand Forks	6,006	10,339	6,248	11,309	7,301	11,150	8,493	5,254	66,100	
Nelson	310	799	319	264	305	778	1,254	1,204	5,233	
Walsh	1,123	2,559	1,067	1,069	1,188	2,565	3,286	2,514	15,371	
Pembina	847	1,781	661	694	806	1,672	2,218	1,720	10,399	
TOTAL	**8,286**	**15,478**	**8,295**	**13,336**	**9,600**	**16,165**	**15,251**	**10,692**	**97,103**	
ROW PERCENT	8.5	15.9	8.5	13.7	9.9	16.7	15.7	11.0		99.9
REGION V										
Cass	6,924	13,339	7,116	12,434	9,964	16,074	13,958	8,438	88,247	
Traill	709	1,452	794	888	651	1,387	1,898	1,845	9,624	
Steele	245	501	229	183	203	509	731	505	3,106	
Ransom	507	1,130	442	~~394~~	~~479~~	1,029	1,439	1,278	6,698	
Richland	1,487	2,685	2,421	2,369	1,533	2,566	3,373	2,773	19,207	
Sargent	443	1,016	367	402	424	933	1,111	816	5,512	
TOTAL	**10,315**	**20,123**	**11,369**	**16,670**	**13,254**	**22,498**	**22,510**	**15,655**	**132,394**	
ROW PERCENT	7.8	15.2	8.6	12.6	100.0	17.0	17.0	11.8		100.0
REGION VI										
Stutsman	1,918	3,929	1,746	2,367	2,138	4,084	4,734	3,238	24,154	
Wells	472	1,202	486	411	421	1,039	1,535	1,413	6,979	
McIntosh	244	691	321	247	249	652	1,289	1,097	4,800	
Logan	223	616	287	203	168	503	908	585	3,493	
Foster	348	877	323	343	310	681	968	761	4,611	
Dickey	580	1,228	502	596	513	1,136	1,418	1,234	7,207	
LaMoure	495	1,136	434	419	422	941	1,456	1,170	6,473	
Barnes	1,023	2,119	1,232	1,343	1,048	2,072	2,720	2,403	13,960	
Griggs	260	576	205	222	261	554	891	745	3,714	
TOTAL	**5,563**	**12,374**	**5,546**	**6,151**	**5,530**	**11,662**	**15,919**	**12,646**	**75,391**	
ROW PERCENT	7.4	16.4	7.3	8.2	7.3	15.5	21.1	16.8		100.0
REGION VII										
Burleigh	4,716	9,657	4,433	6,155	5,713	10,663	8,875	4,599	54,811	
McLean	1,125	2,233	776	895	1,026	2,056	2,489	1,783	12,383	
Sheridan	190	479	188	162	156	451	736	457	2,819	
Kidder	320	712	263	241	260	593	892	552	3,833	
Emmons	387	1,224	503	301	293	870	1,387	912	5,877	
Morton	2,361	4,833	1,962	2,278	2,280	4,341	4,406	2,716	25,177	
Mercer	891	1,700	596	903	906	1,760	1,687	961	9,404	
Oliver	247	478	199	194	211	469	488	209	2,495	
Grant	326	828	302	239	294	662	960	663	4,274	
Sioux	461	950	307	310	276	585	535	196	3,620	
TOTAL	**11,024**	**23,094**	**9,529**	**11,678**	**11,415**	**22,450**	**22,455**	**13,048**	**124,693**	
ROW PERCENT	8.8	18.5	7.6	9.4	9.2	18.0	18.0	10.5		100.0
REGION VIII										
Stark	2,169	4,290	2,143	2,957	2,257	3,800	3,758	2,323	23,697	
Slope	95	219	91	87	86	169	279	131	1,157	
Hettinger	291	786	323	258	291	632	1,016	678	4,275	
Golden Valley	188	459	170	150	167	377	494	386	2,391	
Dunn	406	879	356	389	353	750	962	532	4,627	
Bowman	374	802	313	333	327	713	796	571	4,229	
Billings	93	225	104	85	88	195	251	97	1,138	
Adams	280	605	231	260	266	615	744	583	3,584	
TOTAL	**3,896**	**8,265**	**3,731**	**4,519**	**3,835**	**7,251**	**8,300**	**5,301**	**45,098**	
ROW PERCENT	8.6	18.3	8.3	10.0	8.5	16.1	18.4	11.8		100.0
STATE TOTAL	**54,752**	**111,621**	**52,415**	**69,393**	**58,470**	**109,333**	**116,288**	**80,445**	**652,717**	
ROW PERCENT	8.4	17.1	8.0	10.6	9.0	16.8	17.8	12.3		100.0

SOURCE: "1980 Census of Population; General Population Characteristics"
PC80-1-B36 (Vol. 1, Chapt. B), August 1982.

Table 6 (continued)
Male

	0-4	5-15	16-19	20-24	25-29	30-44	45-64	65>	Total	
									Number	Percent
REGION I										
Williams	1,070	1,882	903	1,299	1,234	1,956	1,887	1,079	11,310	
Divide	118	277	125	104	102	273	453	345	1,797	
McKenzie	340	736	298	348	332	653	651	376	3,734	
TOTAL	**1,528**	**2,895**	**1,326**	**1,751**	**1,668**	**2,882**	**2,991**	**1,800**	**16,841**	
ROW PERCENT	9.1	17.2	7.9	10.4	9.9	17.1	17.7	10.7		100.0
REGION II										
Ward	2,842	5,313	2,349	4,057	3,154	5,365	4,125	2,226	29,431	
Bottineau	372	775	360	362	313	779	886	780	4,627	
Burke	132	320	121	113	113	295	467	364	1,925	
McHenry	322	740	317	263	275	607	845	710	4,079	
Mountrail	342	721	271	269	287	615	813	569	3,887	
Pierce	248	636	267	208	190	467	587	492	3,095	
Renville	135	370	130	110	140	311	365	295	1,856	
TOTAL	**4,393**	**8,875**	**3,815**	**5,382**	**4,472**	**8,439**	**8,088**	**5,436**	**48,900**	
ROW PERCENT	9.0	18.1	7.8	11.0	9.1	17.3	16.5	11.1		99.9
REGION III										
Ramsey	516	1,110	589	490	490	1,052	1,271	898	6,416	
Benson	403	866	308	302	256	597	749	580	4,061	
Cavalier	292	706	304	279	260	623	837	621	3,922	
Towner	135	324	160	150	140	305	454	358	2,026	
Eddy	146	282	136	128	126	252	384	348	1,802	
Rolette	676	1,455	587	441	412	938	973	539	6,021	
TOTAL	**2,168**	**4,743**	**2,084**	**1,790**	**1,684**	**3,767**	**4,668**	**3,344**	**24,248**	
ROW PERCENT	8.9	19.6	8.6	7.4	6.9	15.5	19.3	13.8		100.0
REGION IV										
Grand Forks	3,094	5,279	3,260	6,117	3,890	5,801	4,213	2,080	33,734	
Nelson	164	402	183	147	172	401	638	563	2,670	
Walsh	589	1,314	565	563	626	1,304	1,594	1,137	7,692	
Pembina	428	901	329	378	443	856	1,108	776	5,219	
TOTAL	**4,275**	**7,896**	**4,337**	**7,205**	**5,131**	**8,362**	**7,553**	**4,556**	**49,315**	
ROW PERCENT	8.7	16.0	8.8	14.6	10.4	17.0	15.3	9.2		100.0
REGION V										
Cass	3,533	6,914	3,607	6,106	4,997	8,355	6,866	3,336	43,714	
Traill	322	756	381	451	352	717	926	806	4,711	
Steele	110	257	126	104	116	255	376	247	1,591	
Ransom	272	564	240	202	254	538	736	603	3,409	
Richland	761	1,354	1,403	1,390	863	1,311	1,668	1,197	9,947	
Sargent	238	521	204	229	240	493	565	392	2,882	
TOTAL	**5,236**	**10,366**	**5,961**	**8,482**	**6,822**	**11,669**	**11,137**	**6,581**	**66,254**	
ROW PERCENT	7.9	15.6	9.0	12.8	10.3	17.6	16.8	9.9		99.9
REGION VI										
Stutsman	1,000	2,025	899	1,190	1,102	2,049	2,316	1,365	11,946	
Wells	238	624	265	218	230	512	741	669	3,497	
McIntosh	111	369	176	129	137	313	657	479	2,371	
Logan	107	328	161	120	85	244	467	279	1,791	
Foster	160	479	154	170	159	339	471	352	2,284	
Dickey	303	658	248	309	282	569	706	538	3,613	
LaMoure	246	569	231	235	239	485	728	530	3,263	
Barnes	534	1,061	586	709	556	1,063	1,340	1,041	6,890	
Griggs	135	300	127	113	158	287	445	363	1,928	
TOTAL	**2,834**	**6,413**	**2,847**	**3,193**	**2,948**	**5,861**	**7,871**	**5,616**	**37,583**	
ROW PERCENT	7.5	17.1	7.6	8.5	7.8	15.6	20.9	14.9		99.9
REGION VII										
Burleigh	2,475	4,879	2,155	2,796	2,876	5,405	4,305	1,859	26,750	
McLean	585	1,159	419	470	522	1,104	1,256	861	6,376	
Sheridan	104	253	101	83	80	231	375	227	1,454	
Kidder	166	376	138	139	134	307	444	255	1,959	
Emmons	208	611	263	161	162	428	705	440	2,978	
Morton	1,204	2,542	995	1,165	1,207	2,214	2,241	1,128	12,696	
Mercer	474	861	318	490	497	956	872	431	4,899	
Oliver	129	273	95	107	108	247	256	107	1,322	
Grant	165	463	172	133	153	338	480	320	2,224	
Sioux	256	491	156	157	148	285	264	89	1,846	
TOTAL	**5,766**	**11,908**	**4,812**	**5,701**	**5,887**	**11,515**	**11,198**	**5,717**	**62,504**	
ROW PERCENT	9.2	19.1	7.7	9.1	9.4	18.4	17.9	9.1		99.9
REGION VIII										
Stark	1,092	2,159	1,076	1,537	1,223	1,969	1,808	1,014	11,878	
Slope	52	108	53	53	45	90	148	63	612	
Hettinger	149	389	168	135	167	326	500	319	2,153	
Golden Valley	98	250	94	78	98	193	235	164	1,210	
Dunn	217	427	137	224	196	397	491	281	2,420	
Bowman	199	411	161	169	168	358	396	260	2,122	
Billings	48	102	53	54	48	99	137	55	596	
Adams	155	298	113	135	134	321	357	277	1,790	
TOTAL	**2,010**	**4,144**	**1,905**	**3,385**	**2,079**	**3,753**	**4,072**	**2,433**	**22,781**	
ROW PERCENT	8.8	18.2	8.3	10.5	9.1	16.5	17.9	10.7		100.0
STATE TOTAL	**28,210**	**57,240**	**27,087**	**35,889**	**30,691**	**56,248**	**57,578**	**35,483**	**328,426**	
ROW PERCENT	8.6	17.4	8.3	10.9	9.4	17.1	17.5	10.8		100.0

SOURCE: "1980 Census of Population: General Population Characteristics"
PC80-1-B36 (Vol. 1, Chapt. B), August 1982.

Table 6 (continued)
Female

	0-4	5-15	16-19	20-24	25-29	30-44	45-64	65>	Total	
									Number	Percent
REGION I										
Williams	937	1,877	914	1,152	954	1,792	1,959	1,342	10,927	
Divide	125	247	97	82	97	256	433	360	1,697	
McKenzie	327	700	232	289	280	573	629	368	3,398	
TOTAL	**1,389**	**2,824**	**1,243**	**1,523**	**1,331**	**2,621**	**3,021**	**2,070**	**16,022**	
ROW PERCENT	8.7	17.6	7.8	9.5	8.3	16.4	18.8	12.9		100.0
REGION II										
Ward	2,737	5,019	2,288	3,661	2,815	5,030	4,370	3,041	28,961	
Bottineau	338	773	377	325	271	753	934	841	4,612	
Burke	115	339	108	94	95	289	484	373	1,897	
McHenry	253	647	252	202	240	593	854	738	3,779	
Mountrail	318	700	253	241	276	586	305	613	3,792	
Pierce	194	554	229	218	190	464	600	622	3,071	
Renville	115	328	109	98	101	297	371	333	1,752	
TOTAL	**4,070**	**8,360**	**3,616**	**4,839**	**3,988**	**8,012**	**8,418**	**6,561**	**47,864**	
ROW PERCENT	8.5	17.5	7.6	10.1	8.3	16.7	17.6	13.7		100.0
REGION III										
Ramsey	478	1,105	538	554	497	1,013	1,259	1,188	6,632	
Benson	381	836	280	252	256	550	732	596	3,883	
Cavalier	268	644	278	194	255	578	816	681	3,714	
Towner	150	336	119	128	108	280	461	444	2,026	
Eddy	134	262	103	102	115	242	413	381	1,752	
Rolette	709	1,407	543	524	462	923	986	602	6,156	
TOTAL	**2,120**	**4,590**	**1,861**	**1,754**	**1,693**	**3,586**	**4,667**	**3,892**	**24,163**	
ROW PERCENT	8.8	19.0	7.7	7.3	7.0	14.8	19.3	16.1		100.0
REGION IV										
Grand Forks	2,912	5,060	2,988	5,192	3,411	5,349	4,280	3,174	32,366	
Nelson	146	397	136	117	133	377	616	641	2,563	
Walsh	534	1,245	502	506	562	1,261	1,692	1,377	7,679	
Pembina	419	880	332	316	363	816	1,110	944	5,180	
TOTAL	**4,011**	**7,582**	**3,958**	**6,131**	**4,469**	**7,803**	**7,698**	**6,136**	**47,788**	
ROW PERCENT	8.4	15.9	8.3	12.8	9.4	16.3	16.1	12.8		100.0
REGION V										
Cass	3,391	6,425	3,509	6,328	4,967	7,719	7,092	5,102	44,533	
Traill	387	696	413	437	299	670	972	1,039	4,913	
Steele	135	244	103	79	87	254	355	258	1,515	
Ransom	235	566	202	192	225	491	703	675	3,289	
Richland	726	1,331	1,018	979	670	1,255	1,705	1,576	9,260	
Sargent	205	495	163	173	184	440	546	424	2,630	
TOTAL	**5,079**	**9,757**	**5,408**	**8,188**	**6,432**	**10,829**	**11,373**	**9,074**	**66,140**	
ROW PERCENT	7.7	14.7	8.2	12.4	9.7	16.4	17.2	13.7		100.0
REGION VI										
Stutsman	918	1,904	847	1,177	1,036	2,035	2,418	1,873	12,208	
Wells	234	578	221	193	191	527	794	744	3,482	
McIntosh	133	322	155	118	112	339	632	618	2,429	
Logan	116	288	126	83	83	259	441	306	1,702	
Foster	188	398	169	173	151	342	497	409	2,327	
Dickey	277	570	254	287	231	567	712	696	3,594	
LaMoure	249	567	203	184	183	456	728	640	3,210	
Barnes	489	1,058	646	634	492	1,009	1,380	1,362	7,070	
Griggs	125	276	78	109	103	267	446	382	1,786	
TOTAL	**2,729**	**5,961**	**2,699**	**2,958**	**2,582**	**5,801**	**8,048**	**7,030**	**37,808**	
ROW PERCENT	7.2	15.8	7.1	7.8	6.8	15.3	21.3	18.6		99.9
REGION VII										
Burleigh	2,241	4,778	2,278	3,359	2,837	5,258	4,570	2,740	28,061	
McLean	540	1,074	357	425	504	952	1,233	922	6,007	
Sheridan	86	226	87	79	76	220	361	230	1,365	
Kidder	154	336	125	102	126	286	448	297	1,874	
Emmons	179	613	240	140	131	442	682	472	2,899	
Morton	1,157	2,291	967	1,113	1,073	2,127	2,165	1,588	12,481	
Mercer	417	839	278	413	409	804	815	530	4,505	
Oliver	118	205	104	87	103	222	232	102	1,173	
Grant	161	365	130	106	141	324	480	343	2,050	
Sioux	205	459	151	153	128	300	271	107	1,774	
TOTAL	**5,258**	**11,186**	**4,717**	**5,977**	**5,528**	**10,935**	**11,257**	**7,331**	**62,189**	
ROW PERCENT	8.4	18.0	7.6	9.6	8.9	17.6	18.1	11.8		100.0
REGION VIII										
Stark	1,077	2,131	1,067	1,420	1,034	1,831	1,950	1,309	11,819	
Slope	43	111	38	34	41	79	131	68	545	
Hettinger	142	397	155	123	124	306	516	359	2,122	
Golden Valley	90	209	76	72	69	184	259	222	1,181	
Dunn	189	452	169	165	157	353	471	251	2,207	
Bowman	175	391	152	164	159	355	400	311	2,107	
Billings	45	123	51	31	40	96	114	42	542	
Adams	125	307	118	125	132	294	387	306	1,794	
TOTAL	**1,886**	**4,121**	**1,826**	**2,134**	**1,756**	**3,498**	**4,228**	**2,868**	**22,317**	
ROW PERCENT	8.4	18.5	8.2	9.6	7.9	15.7	18.9	12.8		100.0
STATE TOTAL	**26,542**	**54,381**	**25,328**	**33,504**	**27,779**	**53,085**	**58.710**	**44,962**	**324,291**	
ROW PERCENT	8.2	16.8	7.8	10.3	8.6	16.4	18.1	13.8		100.0

SOURCE: "1980 Census of Population: General Population Characteristics" PC80-1-B36 (Vol. 1, Chapt. B), August 1982.

APPENDIX II

LABOR FORCE AND OCCUPATIONS

Table 7
Unemployment Rates 1982-1986
and Labor Force by County and Region, 1986

	Unemployment Rate				1986			
					Labor Force	Employment	Unemployment	
	1982	1983	1984	1985			Number	Rate
REGION I								
Williams	6.3	8.0	3.9	6.7	13,121	11,461	1,660	12.7
Divide	3.2	3.7	3.4	3.7	1,595	1,509	86	5.4
McKenzie	5.2	6.1	3.4	4.6	3,478	3,195	283	8.1
TOTAL	**5.9**	**7.2**	**3.8**	**6.1**	**18,194**	**16,165**	**2,029**	**11.2**
REGION II								
Ward	6.1	5.5	5.7	6.9	25,524	23,808	1,716	6.7
Bottineau	6.1	6.0	5.0	7.1	3,797	3,515	282	7.4
Burke	5.0	6.1	5.1	6.5	1,582	1,445	137	8.7
McHenry	10.2	10.2	11.3	13.2	3,086	2,670	416	13.5
Mountrail	6.7	7.8	7.2	7.9	3,594	3,243	351	9.8
Pierce	4.4	4.8	4.3	5.4	2,701	2,562	139	5.1
Renville	4.5	5.7	4.7	6.2	1,464	1,333	131	8.9
TOTAL	**6.3**	**6.1**	**6.0**	**7.3**	**41,748**	**38,576**	**3,172**	**7.6**
REGION III								
Ramsey	5.0	5.1	5.2	6.1	6,466	6,125	341	5.3
Benson	8.0	11.1	9.3	8.9	3,419	3,164	255	7.5
Cavalier	5.2	6.3	5.6	6.5	2,753	2,601	152	5.5
Towner	2.9	3.5	3.2	4.3	1,773	1,697	76	4.3
Eddy	8.1	7.8	8.6	9.6	1,584	1,440	144	9.1
Rolette	11.0	12.1	12.0	12.9	5,299	4,602	697	13.2
TOTAL	**6.8**	**7.8**	**7.6**	**8.4**	**21,294**	**19,629**	**1,665**	**7.8**
REGION IV								
Grand Forks	5.4	4.4	3.8	3.8	34,513	33,205	1,308	3.8
Nelson	4.9	6.4	6.4	7.1	2,154	2,004	150	7.0
Walsh	4.6	5.6	5.1	5.6	8,291	7,862	429	5.2
Pembina	7.0	7.8	7.6	7.5	5,416	4,920	496	9.2
TOTAL	**5.4**	**5.2**	**4.6**	**4.6**	**50,374**	**47,991**	**2,383**	**4.7**
REGION V								
Cass	4.9	3.9	3.0	3.6	56,221	54,101	2,120	3.8
Traill	3.8	3.8	3.6	4.5	4,622	4,412	210	4.5
Steele	2.9	3.7	3.5	4.5	1,236	1,171	65	5.3
Ransom	5.0	4.3	4.0	4.2	2,791	2,701	90	3.2
Richland	6.5	4.6	4.0	6.2	8,691	8,267	424	4.9
Sargent	6.7	6.9	4.5	4.6	2,604	2,476	128	4.9
TOTAL	**5.1**	**4.1**	**3.2**	**4.0**	**76,165**	**73,128**	**3,037**	**4.0**
REGION VI								
Stutsman	5.3	5.3	5.1	5.6	12,402	11,702	700	5.6
Wells	5.5	5.9	6.2	7.3	3,044	2,850	194	6.4
McIntosh	3.3	3.9	2.8	3.0	2,349	2,257	92	3.9
Logan	4.6	4.1	3.8	5.1	1,574	1,494	80	5.1
Foster	3.8	4.9	4.9	5.0	2,286	2,146	140	6.1
Dickey	3.9	3.8	3.2	4.0	3,431	3,306	125	3.6
LaMoure	3.2	4.3	3.8	4.9	2,551	2,429	122	4.8
Barnes	5.0	5.4	5.6	6.2	6,180	5,884	296	4.8
Griggs	4.7	4.2	3.9	5.3	1,602	1,531	71	4.4
TOTAL	**4.7**	**4.9**	**4.7**	**5.4**	**35,419**	**33,599**	**1,820**	**5.1**
REGION VII								
Burleigh	6.2	5.6	6.2	6.7	32,067	29,933	2,134	6.7
McLean	6.9	6.8	9.9	9.6	4,741	4,295	446	9.4
Sheridan	5.0	4.0	3.8	5.0	1,310	1,226	84	6.4
Kidder	9.0	9.5	8.9	8.8	1,706	1,535	171	10.0
Emmons	6.4	7.6	8.1	6.8	2,363	2,203	160	6.8
Morton	6.4	6.2	7.6	8.9	12,107	11,143	964	8.0
Mercer	4.0	3.0	7.7	9.9	5,772	5,128	644	11.2
Oliver	5.1	5.5	7.1	8.7	1,269	1,172	97	7.6
Grant	5.5	5.5	5.0	5.4	2,083	1,957	126	6.0
Sioux	11.3	10.4	8.2	9.7	1,369	1,240	129	9.4
TOTAL	**6.2**	**5.6**	**7.0**	**7.7**	**64,787**	**59,832**	**4,955**	**7.6**
REGION VIII								
Stark	7.4	9.0	6.2	7.8	12,345	11,100	1,245	10.1
Slope	6.3	6.6	4.3	7.5	533	478	55	10.3
Hettinger	4.4	5.8	4.3	4.7	2,096	1,962	134	6.4
Golden Valley	5.0	6.0	5.0	6.1	1,066	1,001	65	6.1
Dunn	6.8	9.9	8.4	8.6	2,008	1,829	179	8.9
Bowman	4.7	5.4	2.8	4.6	2,291	2,137	154	6.7
Billings	2.8	3.0	2.2	2.9	827	793	34	4.1
Adams	3.6	4.5	2.5	2.8	1,853	1,782	71	3.8
TOTAL	**6.2**	**7.7**	**5.3**	**6.6**	**23,019**	**21,082**	**1,937**	**8.4**
STATE TOTAL	**5.9**	**5.6**	**5.1**	**5.9**	**331,000**	**310,000**	**21,000**	**6.3**

SOURCE: NDRS31d, 3/86 BM, 4/30/87 R.

Table 8
Annual Average Job Insurance Covered Employment by Industry, and Covered Unemployment by Industry and Sex for 1986

		Covered Unemployment**				
	Covered Employment*	Total		Sex		
Industry	Number	Rate %	N	Male	Female	INA
Agriculture, Forestry, and Fisheries	**2,211**	**9.0**	**199**	**169**	**28**	**2**
Mining	**4,709**	**20.11**	**947**	**886**	**45**	**16**
Construction	**10,836**	**17.31**	**1,876**	**1,778**	**66**	**32**
Building Construction	3,042	13.77	419	395	14	10
Street Highway and Heavy	2,820	29.61	835	789	35	11
Special Trades	4,974	12.50	622	594	17	11
Manufacturing	**15,368**	**4.54**	**699**	**541**	**145**	**13**
Durable Goods	6,213	6.64	413	363	41	9
Nondurable Goods	9,155	3.12	286	178	104	4
Transportation, Communications, and Public Utilities	**14,205**	**2.63**	**375**	**292**	**77**	**6**
Transportation	6,058	4.25	258	227	27	4
Communications	3,291	1.36	45	25	19	1
Public Utilities	4,856	1.48	72	40	31	1
Wholesale Trade	**19,353**	**2.69**	**521**	**427**	**87**	**7**
Retail Trade	**47,521**	**1.29**	**613**	**361**	**245**	**7**
Finance, Insurance, and Real Estate	**12,016**	**0.87**	**105**	**38**	**65**	**2**
Finance	6,815	0.61	42	10	31	1
Insurance	3,349	0.80	27	5	22	0
Real Estate	1,852	1.94	36	23	12	1
Services	**53,691**	**1.16**	**625**	**300**	**316**	**9**
Government	**50,678**	**0.67**	**341**	**209**	**127**	**5**
Federal***	9,787	0.61	60	35	24	1
State	15,778	0.59	94	54	39	1
Local	25,113	0.74	187	120	64	3
Industry Information Not Available	--	--	240	205	33	2
Total	**230,588**	**2.83**	**6,541**	**5,206**	**1,234**	**101**

* Source: RAR20J 10/87
** Source: RAM 491.(A) 7/29/87
*** Excludes 52 for ex-servicemembers

Table 9

Profile of Employment by Industry and Occupation for North Dakota, 1982

									Industry															
Occupation	Total		Mining		Construction		Manufacturing		Trans. Comm. & Public Util.		Wholesale Trade		Retail Trade		Finance Insurance & Real Estate		Services		Government		Agriculture		Self-Emp. & Unpaid Fam. Worker	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Total	**313,890**	**100.0**	**9,387**	**100.0**	**15,682**	**100.0**	**14,930**	**99.9**	**16,798**	**100.0**	**21,130**	**99.9**	**45,384**	**99.9**	**11,830**	**100.0**	**82,035**	**100.0**	**31,860**	**100.0**	**47,442**	**100.0**	**17,412**	**99.9**
Row Percent	100.0		3.0		5.0		4.8		5.3		6.7		14.6		3.8		26.1		10.1		15.1		5.5	
Professional	48,515	15.4	448	4.8	598	3.8	1,084	7.3	1,927	11.5	1,086	5.1	934	2.1	918	7.8	31,622	38.5	7,289	22.9	171	0.3	2,438	14.0
Row Percent	99.9		0.9		1.2		2.2		4.0		2.2		1.9		1.9		65.2		15.0		0.4		5.0	
Managerial	30,980	9.9	464	4.9	1,687	10.8	1,257	8.4	1,505	9.0	2,687	12.7	4,980	11.0	2,446	20.7	4,963	6.1	4,946	15.5	6	0.1<	6,039	34.7
Row Percent	100.0		1.5		5.4		4.0		4.9		8.7		16.1		7.9		16.0		16.0		0.1<		19.5	
Sales	18,442	5.9	70	0.7	100	0.6	543	3.6	334	2.0	4,297	20.3	10,183	22.4	1,015	8.6	646	0.8	54	0.2	9	0.1<	1,191	6.8
Row Percent	99.9		0.4		0.5		2.9		1.8		23.3		55.2		5.5		3.5		0.3		0.1<		6.5	
Clerical	48,022	15.3	468	5.0	1,051	6.7	1,898	12.7	3,403	20.2	5,230	24.8	7,572	16.7	6,443	54.5	13,167	16.1	8,199	25.7	173	0.3	418	2.4
Row Percent	100.0		1.0		2.2		3.9		7.1		10.9		15.8		13.4		27.4		17.1		0.3		0.9	
Craft	32,563	10.4	1,922	20.5	8,159	52.0	2,661	17.8	4,248	25.3	3,177	15.0	2,784	6.1	107	0.9	2,389	2.9	3,692	11.6	61	0.1	3,363	19.3
Row Percent	100.0		5.9		25.1		8.2		13.0		9.8		8.6		0.3		7.3		11.3		0.2		10.3	
Operatives Except Trans.	13,686	4.4	4,752	50.6	434	2.8	4,136	27.7	130	0.8	227	1.1	1,513	3.3	-	-	1,590	1.9	131	0.4	8	0.1<	765	4.4
Row Percent	100.0		34.7		3.2		30.2		1.0		1.7		11.0				11.6		1.0		0.1<		5.6	
Transportation Operatives	12,697	4.0	423	4.5	549	3.5	1,154	7.7	3,484	20.7	2,122	10.0	656	1.4	7	0.1<	2,644	3.2	440	1.4	374	0.8	844	4.8
Row Percent	100.0		3.3		4.3		9.1		27.4		16.7		5.2		0.1<		20.8		3.5		3.0		6.7	
Other Operatives	4,087	1.3	281	3.0	281	1.8	587	3.9	102	0.6	119	0.6	10	0.1<	7	0.1<	88	0.1	146	0.5	2,403	5.1	63	0.4
Row Percent	100.0		6.9		6.9		14.4		2.5		2.9		0.2		0.2		2.1		3.6		58.8		1.5	
Service	47,966	15.3	80	0.9	112	0.7	275	1.9	244	1.4	387	1.8	14,846	32.7	712	6.0	23,996	29.3	5,163	16.2	7	0.1<	2,144	12.3
Row Percent	100.0		0.2		0.2		0.6		0.5		0.8		30.9		1.5		50.0		10.8		0.1<		4.5	
Laborers	13,546	4.3	479	5.1	2,711	17.3	1,335	8.9	1,421	8.5	1,798	8.5	1,906	4.2	175	1.5	930	1.1	1,800	5.6	844	1.8	147	0.8
Row Percent	100.0		3.5		20.0		9.8		10.5		13.3		14.1		1.3		6.9		13.3		6.2		1.1	
Farm	43,386	13.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43,386	91.4	-	-
Row Percent	100.0																				100.0			

Source: "North Dakota Employment Projections to 1990 by Industry & Occupation"
Job Service North Dakota/Research and Statistics, May 1985.

APPENDIX III

EMPLOYMENT

BD-533

BM DATE: 87/1

02-11-88

TABLE 10

NORTH DAKOTA NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT

1 9 8 7

INDUSTRIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL AVERAGE
TOTAL	243,600	243,900	245,550	250,350	255,100	255,550	253,950	252,350	256,100	257,950	255,600	254,350	252,250
MINING	3,650	3,550	3,500	3,750	4,000	4,050	4,350	4,350	4,450	4,650	4,500	4,200	4,100
COAL	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,050	1,050	1,100
OIL & GAS EXPLORATION	2,400	2,300	2,200	2,300	2,400	2,400	2,700	2,700	2,800	3,000	3,000	2,900	2,600
SAND & GRAVEL	150	150	200	350	500	550	550	550	550	550	450	250	400
CONSTRUCTION	7,750	7,300	7,600	9,050	11,600	12,600	13,100	13,600	13,300	12,900	11,100	9,000	10,800
BUILDING	2,300	2,100	2,000	2,300	2,800	3,200	3,300	3,400	3,200	3,100	2,900	2,600	2,800
STREET, HWY, HEAVY	1,250	1,300	1,400	1,950	3,400	3,700	4,000	4,100	4,100	3,800	2,700	1,600	2,800
SPECIAL TRADE	4,200	3,900	4,200	4,800	5,400	5,700	5,800	6,100	6,000	6,000	5,500	4,800	5,200
MANUFACTURING	14,950	15,250	15,350	15,350	15,550	15,900	16,100	15,650	16,500	16,550	16,100	15,850	15,700
DURABLE GOODS	5,750	6,050	6,200	6,350	6,600	6,800	6,900	6,900	6,850	6,900	6,900	6,500	6,450
STONE, CLAY	450	450	500	600	750	850	800	850	800	800	700	500	650
FABRICATED METALS	700	700	700	700	750	800	850	850	850	850	850	800	750
MACHINERY, ETC	3,400	3,700	3,800	3,800	3,800	3,900	4,000	4,000	4,000	4,000	4,000	3,900	3,800
OTHER DURABLES	1,200	1,200	1,200	1,250	1,300	1,250	1,250	1,200	1,200	1,250	1,350	1,300	1,250
NONDURABLE GOODS	9,200	9,200	9,150	9,000	8,950	9,100	9,200	8,750	9,650	9,650	9,200	9,350	9,250
FOOD & KINDRED	4,800	4,800	4,750	4,500	4,450	4,500	4,500	4,050	4,850	4,850	4,400	4,550	4,550
DAIRY PRODUCTS	750	750	700	750	750	800	800	800	800	750	750	750	750
FRUIT, VEG. & SUGAR	2,000	2,100	2,100	1,750	1,700	1,700	1,700	1,300	2,100	2,300	1,750	1,850	1,850
BAKERY	350	300	350	350	350	350	350	350	350	350	350	350	350
OTHER FOOD	1,700	1,650	1,600	1,650	1,650	1,650	1,650	1,600	1,600	1,450	1,550	1,600	1,600
PRINTING & PUBLISHING	2,300	2,300	2,200	2,400	2,300	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
OTHER NONDURABLES	2,100	2,100	2,100	2,100	2,200	2,200	2,300	2,300	2,400	2,400	2,400	2,400	2,300
TRANS, COMM & UTIL	15,900	15,900	15,900	16,100	16,300	16,200	16,300	16,400	16,500	16,300	16,200	16,300	16,200
TRANSPORTATION	7,900	8,000	8,000	8,100	8,300	8,200	8,200	8,300	8,500	8,300	8,200	8,300	8,200
TRUCKING WAREHOUSING	4,500	4,500	4,500	4,600	4,700	4,800	4,800	4,900	5,000	4,800	4,700	4,800	4,700
OTHER TRANSPORTATION	3,400	3,500	3,500	3,500	3,600	3,400	3,400	3,400	3,500	3,500	3,500	3,500	3,500
COMMUNICATIONS	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200
UTILITIES	4,800	4,700	4,700	4,800	4,800	4,800	4,900	4,900	4,800	4,800	4,800	4,800	4,800
TRADE	65,200	64,700	65,200	67,100	68,300	68,500	68,400	68,500	68,500	68,200	68,400	68,800	67,400
WHOLESALE TRADE	18,900	18,800	19,000	19,400	19,700	19,800	19,700	19,700	19,600	19,600	19,500	19,500	19,400
DURABLE GOODS	8,800	8,700	8,900	9,000	9,100	9,200	9,300	9,300	9,200	9,200	9,200	9,200	9,100
NONDURABLE GOODS	10,100	10,100	10,100	10,400	10,600	10,600	10,400	10,400	10,400	10,400	10,300	10,300	10,300
RETAIL TRADE	46,300	45,900	46,200	47,700	48,600	48,700	48,700	48,800	48,900	48,600	48,900	49,300	48,000
GEN'L MERCHANDISE	6,300	6,000	6,000	6,200	6,200	6,100	6,100	6,200	6,300	6,400	6,800	7,000	6,300
FOOD STORES	6,500	6,500	6,500	6,600	6,700	6,700	6,700	6,700	6,700	6,700	6,700	6,700	6,600
AUTO & SERVICE	6,500	6,500	6,400	6,600	6,700	6,800	6,800	6,700	6,700	6,600	6,500	6,500	6,600
APPAREL & ACCESS	2,600	2,500	2,500	2,600	2,600	2,600	2,500	2,600	2,600	2,600	2,700	2,800	2,600
OTHER RETAIL	24,400	24,400	24,800	25,700	26,400	26,500	26,600	26,600	26,600	26,300	26,200	26,300	25,900
FIN, INS. & REAL ESTATE	12,450	12,400	12,400	12,400	12,550	12,700	12,700	12,650	12,450	12,350	12,300	12,400	12,550
FINANCE	6,900	6,800	6,800	6,800	6,900	6,900	6,900	6,800	6,800	6,700	6,700	6,800	6,900
BANKING	4,200	4,100	4,100	4,100	4,200	4,200	4,200	4,200	4,200	4,100	4,100	4,200	4,200
OTHER FINANCE	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,600	2,600	2,600	2,600	2,600	2,700
INSURANCE	3,800	3,800	3,800	3,800	3,800	3,900	3,900	3,900	3,800	3,800	3,800	3,800	3,800
REAL ESTATE	1,750	1,800	1,800	1,800	1,850	1,900	1,900	1,950	1,850	1,850	1,800	1,800	1,850
SERVICES	59,100	59,300	59,700	60,400	60,600	61,000	61,300	61,300	61,800	61,500	61,200	61,700	60,900
LODGING	4,000	4,000	4,000	4,100	4,200	4,300	4,300	4,400	4,400	4,200	4,100	4,100	4,200
HEALTH SERVICES	25,600	25,600	25,800	25,800	26,000	26,400	26,500	26,500	26,400	26,200	26,300	26,400	26,200
NURS'G HOMES/HOSPITALS	18,900	18,900	19,000	19,000	19,200	19,500	19,500	19,600	19,500	19,300	19,400	19,400	19,300
OTHER HEALTH	6,700	6,700	6,800	6,800	6,800	6,900	7,000	6,900	6,900	6,900	6,900	7,000	6,900
OTHER SERVICES	29,500	29,700	29,900	30,500	30,400	30,300	30,500	30,400	31,000	31,100	30,800	31,200	30,500
GOVERNMENT	64,600	65,500	65,900	66,200	66,200	64,600	61,700	59,900	62,600	65,500	65,800	66,100	64,600
FEDERAL	10,000	9,900	10,000	10,300	10,200	10,400	10,500	10,400	10,400	10,300	10,400	10,400	10,300
STATE & LOCAL	54,600	55,600	55,900	55,900	56,000	54,200	51,200	49,500	52,200	55,200	55,400	55,700	54,300
STATE	19,700	20,300	20,500	20,500	20,300	18,900	17,900	17,300	18,400	20,100	20,300	20,100	19,500
EDUCATION	12,700	13,300	13,500	13,300	13,100	11,400	10,200	10,000	11,200	13,100	13,400	13,400	12,400
OTHER STATE	7,000	7,000	7,000	7,200	7,200	7,500	7,700	7,300	7,200	7,000	6,900	6,700	7,100
LOCAL	34,900	35,300	35,400	35,400	35,700	35,300	33,300	32,200	33,800	35,100	35,100	35,600	34,800
EDUCATION	17,500	17,900	18,000	17,900	17,900	15,700	13,500	13,000	15,900	17,500	17,700	17,900	16,700
OTHER LOCAL	17,400	17,400	17,400	17,500	17,800	19,600	19,800	19,200	17,900	17,600	17,400	17,700	18,100

50-533

BM DATE: 87/1

TABLE 11
NORTH DAKOTA NONAGRICULTURAL
WAGE AND SALARY EMPLOYMENT
1 9 8 6

12-10-87

INDUSTRIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL AVERAGE
TOTAL	244,300	244,350	244,750	248,400	253,150	253,700	250,850	250,450	252,850	254,050	251,350	250,950	249,900
MINING	6,100	5,650	5,150	4,750	4,400	4,500	4,250	4,450	4,350	4,300	4,300	4,000	4,650
COAL	1,250	1,250	1,250	1,200	1,200	1,200	1,150	1,200	1,200	1,200	1,200	1,200	1,200
OIL & GAS EXPLORATION	4,700	4,200	3,700	3,200	2,800	2,800	2,600	2,700	2,600	2,600	2,700	2,600	3,100
SAND & GRAVEL	150	200	200	350	400	500	500	550	550	500	400	200	350
CONSTRUCTION	7,750	7,300	7,650	8,950	11,400	12,700	13,400	13,900	13,600	13,000	11,100	9,050	10,800
BUILDING	2,400	2,200	2,200	2,500	2,900	3,400	3,700	3,900	3,900	3,500	3,100	2,700	3,000
STREET, HWY, HEAVY	1,250	1,300	1,550	1,950	3,100	3,900	4,100	4,200	4,000	3,900	2,900	1,650	2,800
SPECIAL TRADE	4,100	3,800	3,900	4,500	5,400	5,400	5,600	5,800	5,700	5,600	5,100	4,700	5,000
MANUFACTURING	14,700	15,050	14,800	15,000	15,300	15,550	15,650	15,300	15,800	16,050	15,600	15,400	15,400
DURABLE GOODS	5,650	5,800	5,950	6,300	6,350	6,500	6,500	6,600	6,350	6,300	6,250	6,050	6,200
STONE, CLAY	450	450	450	650	800	950	950	950	900	850	700	550	700
FABRICATED METALS	600	600	600	600	650	650	700	700	700	700	750	700	650
MACHINERY, ETC	3.600	3,700	3,800	3,900	3,800	3,800	3,700	3,800	3,600	3,600	3,600	3,600	3,700
OTHER DURABLES	1,000	1,050	1,100	1,150	1,100	1,100	1,150	1,150	1,150	1,150	1,200	1,200	1,150
NONDURABLE GOODS	9,050	9,250	8,850	8,700	8,950	9,050	9,150	8,700	9,450	9,750	9,350	9,350	9,200
FOOD & KINDRED	4,650	4,750	4,350	4,200	4,350	4,450	4,550	4,100	4,750	5,150	4,750	4,850	4,600
DAIRY PRODUCTS	800	800	800	800	800	850	850	850	750	750	750	750	800
FRUIT, VEG. & SUGAR	1,850	1,950	1,600	1,500	1,550	1,550	1,550	1,150	1,900	2,300	1,900	2,000	1,750
BAKERY	350	350	350	350	350	350	350	350	350	350	350	350	350
OTHER FOOD	1,650	1,650	1,600	1,550	1,650	1,700	1,800	1,750	1,750	1,750	1,750	1,750	1,700
PRINTING & PUBLISHING	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
OTHER NONDURABLES	2,000	2,100	2,100	2,100	2,200	2,200	2,200	2,200	2,300	2,200	2,200	2,100	2,200
TRANS, COMM & UTIL	16,100	15,900	15,700	15,800	16,100	16,000	16,000	16,100	16,200	16,200	16,100	16,200	16,100
TRANSPORTATION	7,800	7,600	7,500	7,700	7,900	7,800	7,800	7,900	8,100	8,100	8,100	8,200	7,900
TRUCKING WAREHOUSING	4,300	4,200	4,100	4,200	4,400	4,500	4,500	4,600	4,700	4,700	4,700	4,800	4,500
OTHER TRANSPORTATION	3,500	3,400	3,400	3,500	3,500	3,300	3,300	3,300	3,400	3,400	3,400	3,400	3,400
COMMUNICATIONS	3,400	3,400	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,200	3,200	3,300
UTILITIES	4,900	4,900	4,900	4,800	4,900	4,900	4,900	4,900	4,800	4,800	4,800	4,800	4,900
TRADE	65,100	64,800	65,200	66,700	67,800	68,300	67,700	68,000	67,500	67,300	67,400	68,300	66,900
WHOLESALE TRADE	19,100	19,100	19,100	19,600	19,800	19,900	19,700	19,700	19,400	19,500	19,400	19,400	19,400
DURABLE GOODS	9,000	9,000	9,000	9,200	9,200	9,200	9,400	9,300	9,200	9,100	9,000	9,000	9,100
NONDURABLE GOODS	10,100	10,100	10,100	10,400	10,600	10,700	10,300	10,400	10,200	10,400	10,400	10,400	10,300
RETAIL TRADE	46,000	45,700	46,100	47,100	48,000	48,400	48,000	48,300	48,100	47,800	48,000	48,900	47,500
GEN'L MERCHANDISE	6,100	5,900	5,800	5,900	5,900	6,000	6,000	6,100	6,100	6,200	6,500	6,800	6,100
FOOD STORES	6,500	6,500	6,500	6,500	6,500	6,600	6,600	6,700	6,700	6,700	6,700	6,900	6,600
AUTO & SERVICE	6,600	6,500	6,500	6,600	6,700	6,800	6,800	6,800	6,700	6,600	6,700	6,700	6,700
APPAREL & ACCESS	2,700	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,700	2,800	2,600
OTHER RETAIL	24,100	24,200	24,700	25,500	26,300	26,400	26,000	26,100	26,000	25,700	25,400	25,700	25,500
FIN, INS. & REAL ESTATE	12,150	12,250	12,250	12,400	12,450	12,550	12,550	12,500	12,500	12,600	12,450	12,600	12,450
FINANCE	6,700	6,800	6,800	6,800	6,800	6,800	6,800	6,800	6,800	6,900	6,800	6,900	6,800
BANKING	4,200	4,200	4,200	4,200	4,200	4,200	4,200	4,200	4,200	4,200	4,100	4,200	4,200
OTHER FINANCE	2,500	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,700	2,700	2,700	2,600
INSURANCE	3,700	3,700	3,700	3,800	3,800	3,800	3,800	3,800	3,800	3,800	3,800	3,800	3,800
REAL ESTATE	1,750	1,750	1,750	1,800	1,850	1,950	1,950	1,900	1,900	1,900	1,850	1,900	1,850
SERVICES	58,200	58,000	58,500	59,200	59,500	59,700	59,500	59,800	59,900	59,700	59,100	59,500	59,200
LODGING	4,200	4,100	4,100	4,200	4,300	4,200	4,300	4,300	4,300	4,200	4,100	4,200	4,200
HEALTH SERVICES	24,900	24,800	25,000	25,000	25,100	25,400	25,300	25,500	25,400	25,300	25,400	25,500	25,200
NURS'G HOMES/HOSPITALS	18,500	18,500	18,600	18,500	18,600	18,800	18,700	18,800	18,800	18,700	18,800	18,900	18,700
OTHER HEALTH	6,400	6,300	6,400	6,500	6,500	6,600	6,600	6,700	6,600	6,600	6,600	6,600	6,500
OTHER SERVICES	29,100	29,100	29,400	30,000	30,100	30,100	29,900	30,000	30,200	30,200	29,600	29,800	29,800
GOVERNMENT	64,200	65,400	65,500	65,600	66,200	64,400	61,800	60,400	63,000	64,900	65,300	65,900	64,400
FEDERAL	9.600	9,600	9,600	9,600	9,600	9,900	9,900	9,900	10,000	10,000	10,000	10,100	9,800
STATE & LOCAL	54,600	55,800	55,900	56,000	56,600	54,500	51,900	50,500	53,000	54,900	55,300	55,800	54,600
STATE	19.500	20,300	20,500	20,300	20,400	18,900	18,100	17,600	18,700	20,300	20,400	20,500	19,600
EDUCATION	12,700	13,500	13,600	13,300	13,200	11,400	10,400	10,100	11,600	13,300	13,500	13,600	12,500
OTHER STATE	6,800	6,800	6,900	7,000	7,200	7,500	7,700	7,500	7,100	7,000	6,900	6,900	7,100
LOCAL	35,100	35,500	35,400	35,700	36,200	35,600	33,800	32,900	34,300	34,600	34,900	35,300	35,000
EDUCATION	17,800	18,200	18,200	18,200	18,300	16,000	13,800	13,300	16,100	17,100	17,800	17,700	16,900
OTHER LOCAL	17,300	17,300	17,200	17,500	17,900	19,600	20,000	19,600	18,200	17,500	17,100	17,600	18,100

SO-233 12-03-87

BM DATE: 87/1

TABLE 12
NORTH DAKOTA NONAGRICULTURAL
WAGE AND SALARY EMPLOYMENT
1985

INDUSTRIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL AVERAGE
TOTAL	246,150	245,200	245,650	250,300	255,050	256,300	253,700	253,000	255,250	256,350	254,400	252,550	252,100
MINING	7,200	6,750	6,700	6,600	6,800	7,050	7,050	7,150	6,950	6,850	6,850	6,700	6,850
COAL	1,400	1,400	1,400	1,400	1,400	1,450	1,400	1,400	1,350	1,300	1,300	1,300	1,350
OIL & GAS EXPLORATION	5,600	5,100	5,100	4,900	5,000	5,100	5,100	5,200	5,100	5,100	5,100	5,200	5,100
SAND & GRAVEL	200	250	200	300	400	500	550	550	500	450	450	200	400
CONSTRUCTION	9,000	8,500	8,650	10,000	12,500	13,700	14,200	14,700	14,100	13,300	12,000	9,500	11,700
BUILDING	2,700	2,400	2,400	2,700	3,200	3,600	3,900	4,000	3,700	3,700	3,500	3,000	3,200
STREET, HWY, HEAVY	1,800	1,800	1,850	2,500	3,900	4,400	4,500	4,700	4,600	4,000	3,200	1,900	3,300
SPECIAL TRADE	4,500	4,300	4,400	4,800	5,400	5,700	5,800	6,000	5,800	5,600	5,300	4,600	5,200
MANUFACTURING	15,400	15,400	14,800	15,050	15,400	15,750	15,500	15,250	15,750	16,000	15,250	15,250	15,350
DURABLE GOODS	6,100	6,100	6,100	6,300	6,450	6,700	6,600	6,650	6,600	6,500	6,300	6,050	6,350
STONE, CLAY	500	450	450	650	900	1,000	1,050	1,050	1,000	950	800	550	800
FABRICATED METALS	700	650	650	650	650	700	700	700	650	700	650	650	650
MACHINERY, ETC	3,900	4,000	4,000	4,000	3,900	4,000	3,800	3,900	3,900	3,800	3,800	3,800	3,900
OTHER DURABLES	1,000	1,000	1,000	1,000	1,000	1,000	1,050	1,000	1,050	1,050	1,050	1,050	1,000
NONDURABLE GOODS	9,300	9,300	8,700	8,750	8,950	9,050	8,900	8,600	9,150	9,500	8,950	9,200	9,000
FOOD & KINDRED	4,800	4,800	4,200	4,250	4,350	4,450	4,300	4,100	4,650	5,000	4,450	4,600	4,500
DAIRY PRODUCTS	900	900	900	900	950	1,000	950	950	850	850	800	800	900
FRUIT, VEG. & SUGAR	1,850	1,850	1,350	1,400	1,400	1,450	1,350	1,100	1,800	2,200	1,750	1,800	1,600
BAKERY PRODUCTS	450	450	450	450	450	400	400	400	400	350	350	350	400
OTHER FOOD	1,600	1,600	1,500	1,500	1,550	1,600	1,600	1,650	1,600	1,600	1,550	1,650	1,600
PRINTING & PUBLISHING	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,500	2,400
OTHER NONDURABLES	2,100	2,100	2,100	2,100	2,200	2,200	2,200	2,100	2,100	2,100	2,100	2,100	2,100
TRANS, COMM & UTIL	16,400	16,300	16,200	16,400	16,500	16,600	16,500	16,400	16,600	16,800	16,400	16,400	16,500
TRANSPORTATION	7,800	7,700	7,600	7,800	7,900	7,800	7,700	7,700	8,000	8,200	8,000	8,000	7,900
TRUCKING WAREHOUSING	4,200	4,100	4,000	4,100	4,200	4,300	4,200	4,200	4,400	4,600	4,500	4,600	4,300
OTHER TRANSPORTATION	3,600	3,600	3,600	3,700	3,700	3,500	3,500	3,500	3,600	3,600	3,500	3,400	3,600
COMMUNICATIONS	3,400	3,400	3,400	3,400	3,400	3,500	3,500	3,500	3,500	3,500	3,400	3,400	3,400
UTILITIES	5,200	5,200	5,200	5,200	5,200	5,300	5,300	5,200	5,100	5,100	5,000	5,000	5,200
TRADE	65,900	65,100	65,800	67,500	68,600	68,900	68,200	68,700	68,100	67,700	68,000	68,300	67,600
WHOLESALE TRADE	19,700	19,600	19,700	20,200	20,200	20,400	20,200	20,100	19,900	19,900	19,700	19,700	20,000
DURABLE GOODS	9,700	9,700	9,800	9,900	9,900	10,100	10,100	10,000	9,800	9,600	9,400	9,300	9,800
NONDURABLE GOODS	10,000	9,900	9,900	10,300	10,300	10,300	10,100	10,100	10,100	10,300	10,300	10,400	10,200
RETAIL TRADE	46,200	45,500	46,100	47,300	48,400	48,500	48,000	48,600	48,200	47,800	48,300	48,600	47,600
GEN'L MERCHANDISE	6,200	5,800	5,700	5,700	5,800	5,800	5,800	5,900	6,000	6,200	6,500	6,700	6,000
FOOD STORES	6,200	6,200	6,200	6,400	6,700	6,700	6,600	6,700	6,600	6,700	6,700	6,800	6,500
AUTO & SERVICE	6,700	6,700	6,800	6,800	6,800	6,900	6,900	6,800	6,700	6,700	6,700	6,800	6,800
APPAREL & ACCESS	2,800	2,700	2,700	2,800	2,800	2,700	2,800	2,900	2,900	2,800	2,900	2,900	2,800
OTHER RETAIL	24,300	24,100	24,700	25,600	26,300	26,400	25,900	26,300	26,000	25,400	25,500	25,400	25,500
FIN, INS. & REAL ESTATE	12,250	12,250	12,300	12,450	12,550	12,700	12,650	12,700	12,550	12,300	12,400	12,400	12,500
FINANCE	6,800	6,800	6,800	6,800	6,800	6,900	6,900	6,900	6,800	6,700	6,800	6,800	6,800
BANKING	4,300	4,300	4,300	4,300	4,300	4,400	4,400	4,400	4,300	4,200	4,300	4,300	4,300
OTHER FINANCE	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500
INSURANCE	3,700	3,700	3,700	3,800	3,800	3,800	3,800	3,800	3,800	3,700	3,700	3,700	3,800
REAL ESTATE	1,750	1,750	1,800	1,850	1,950	2,000	1,950	2,000	1,950	1,900	1,900	1,900	1,900
SERVICES	56,700	56,700	57,000	57,900	57,900	58,000	58,400	58,600	58,800	58,600	58,500	58,600	58,000
LODGING	4,200	4,200	4,200	4,200	4,300	4,300	4,400	4,500	4,400	4,400	4,300	4,300	4,300
HEALTH SERVICES	24,900	24,700	24,800	24,900	24,900	25,100	25,100	25,200	24,900	24,900	24,900	25,100	25,000
NURS'G HOMES/HOSPITALS	18,700	18,600	18,600	18,700	18,700	18,900	18,800	18,800	18,600	18,500	18,500	18,600	18,700
OTHER HEALTH	6,200	6,100	6,200	6,200	6,200	6,200	6,300	6,400	6,300	6,400	6,400	6,500	6,300
OTHER SERVICES	27,600	27,800	28,000	28,800	28,700	28,600	28,900	28,900	29,500	29,300	29,300	29,200	28,700
GOVERNMENT	63,300	64,200	64,200	64,400	64,800	63,600	61,200	59,500	62,400	64,800	65,000	65,400	63,600
FEDERAL	9,200	9,200	9,100	9,300	9,300	9,600	9,700	9,600	9,600	9,500	9,600	9,600	9,400
STATE & LOCAL	54,100	55,000	55,100	55,100	55,500	54,000	51,500	49,900	52,800	55,300	55,400	55,800	54,200
STATE	19,600	20,100	20,100	19,900	19,900	18,900	18,300	17,300	18,400	20,200	20,200	20,300	19,500
EDUCATION	12,800	13,300	13,300	13,000	13,000	11,500	10,800	10,000	11,400	13,400	13,500	13,500	12,500
OTHER STATE	6,800	6,800	6,800	6,900	6,900	7,400	7,500	7,300	7,000	6,800	6,700	6,800	7,000
LOCAL	34,500	34,900	35,000	35,200	35,600	35,100	33,200	32,600	34,400	35,100	35,200	35,500	34,700
EDUCATION	17,400	17,800	17,900	17,800	17,800	15,600	13,400	12,900	16,300	17,500	17,800	17,800	16,700
OTHER LOCAL	17,100	17,100	17,100	17,400	17,800	19,500	19,800	19,700	18,100	17,600	17,400	17,700	18,000

Table 13
Annual Average Job Insurance Covered Employment by Industry for North Dakota 1984-1986

	1984	1985	Change 1984-85		1986	Change 1985-86	
	N	N	N	%	N	N	%
Mining	7,480	6,883	-597	-8.0	4,709	-2,174	-31.6
Construction	13,706	11,678	-2,028	-14.8	10,836	-842	-7.2
Manufacturing	15,491	15,450	-41	-0.3	15,369	-81	-0.5
Transportation, Communication, and Public Utilities	14,409	14,538	129	0.9	14,204	-334	-2.3
Wholesale Trade	20,498	19,938	-560	-2.7	19,353	-585	-2.9
Retail Trade	47,088	47,641	553	1.2	47,521	-120	-0.3
Finance, Insurance, and Real Estate	11,795	12,014	219	1.9	12,016	2	0.0
Services	52,045	52,606	561	1.1	53,691	1,085	2.1
Agriculture	2,327	2,261	-66	-2.8	2,211	-50	-2.2
Government	48,724	49,978	1,254	2.6	50,678	700	1.4
Total	**233,563**	**232,987**	**-576**	**-0.2**	**230,588**	**2,399**	**-1.0**

SOURCE: RAQ20J

Table 14
Industry of Employed Individuals by Age and Sex: 1980

	Total						Agriculture, Forestry, and Fisheries					
	Total		Male		Female		Total		Male		Female	
Age	N	%	N	%	N	%	N	%	N	%	N	%
16-19	23,424	8.6	12,069	7.4	11,355	10.4	2,744	6.6	2,446	6.5	298	7.5
20-24	44,996	16.5	23,925	14.6	21,071	19.3	4,320	10.4	3,883	10.3	437	11.0
25-29	42,332	15.5	25,226	15.4	17,106	15.7	4,471	10.8	4,047	10.8	424	10.6
30-34	32,448	11.9	20,671	12.6	11,777	10.8	3,723	9.0	3,370	9.0	353	8.9
35-44	46,346	17.0	28,257	17.3	18,089	16.6	7,007	16.9	6,107	16.3	900	22.6
45-54	41,111	15.1	25,833	15.8	15,278	14.0	8,277	20.0	7,376	19.7	901	22.6
55-59	17,973	6.6	11,842	7.2	6,131	5.6	4,375	10.5	4,040	10.8	335	8.4
60-64	13,041	4.8	8,416	5.1	4,625	4.3	3,358	8.1	3,156	8.4	202	5.1
≥65	10,949	4.0	7,427	4.5	3,522	3.2	3,212	7.7	3,082	8.2	130	3.3
Total	**272,620**	**100.0**	**163,666**	**99.9**	**108,954**	**99.9**	**41,487**	**100.0**	**37,507**	**100.0**	**3,980**	**100.0**
Row %	100.0		60.0		40.0		100.0		90.4		9.6	

	Mining						Construction					
	Total		Male		Female		Total		Male		Female	
Age	N	%	N	%	N	%	N	%	N	%	N	%
16-19	497	8.2	478	8.5	19	4.4	978	5.1	850	4.9	128	8.4
20-24	1,664	27.6	1,507	26.9	157	36.1	3,452	18.2	3,175	18.2	277	18.1
25-29	1,255	20.8	1,186	21.2	69	15.9	3,529	18.6	3,244	18.6	285	18.6
30-34	762	12.6	735	13.1	27	6.2	2,551	13.4	2,367	13.6	184	12.0
35-44	956	15.9	862	15.4	94	21.6	3,612	19.0	3,256	18.6	356	23.2
45-54	658	10.9	605	10.8	53	12.2	2,597	13.7	2,431	13.9	166	10.8
55-59	115	1.9	110	2.0	5	1.2	1,115	5.9	1,048	6.0	67	4.4
60-64	64	1.1	55	1.0	9	2.1	682	3.6	637	3.6	45	2.9
≥65	58	1.0	56	1.0	2	0.1	483	2.5	459	2.6	24	1.6
Total	**6,029**	**100.0**	**5,594**	**99.9**	**435**	**99.8**	**18,999**	**100.0**	**17,467**	**100.0**	**1,532**	**100.0**
Row %	100.0		92.8		7.2		100.0		91.9		8.1	

Table 14 (Continued)

	Manufacturing Total*						Durable Goods Manufacturing					
	Total		Male		Female		Total		Male		Female	
Age	N	%	N	%	N	%	N	%	N	%	N	%
16-19	997	6.3	712	6.1	285	6.9	409	5.3	315	5.2	94	5.6
20-24	3,310	20.8	2,223	18.9	1,087	26.3	1,845	24.0	1,345	22.4	500	30.0
25-29	3,045	19.2	2,365	20.1	680	16.5	1,558	20.3	1,239	20.6	319	19.2
30-34	2,138	13.5	1,613	13.7	525	12.7	1,044	13.6	840	14.0	204	12.3
35-44	2,680	16.9	2,006	17.1	674	16.3	1,323	17.2	1,034	17.2	289	17.4
45-54	2,021	12.7	1,552	13.2	469	11.4	864	11.2	700	11.6	164	9.9
55-59	850	5.3	676	5.7	174	4.2	311	4.1	274	4.5	37	2.2
60-64	493	3.1	360	3.1	133	3.2	204	2.7	181	3.0	23	1.4
>65	343	2.2	241	2.1	102	2.5	122	1.6	88	1.5	34	2.0
Total	**15,877**	**100.0**	**11,748**	**100.0**	**4,129**	**100.0**	**7,680**	**100.0**	**6,016**	**100.0**	**1,664**	**100.0**
Row %	100.0		74.0		26.0		100.0		78.3		21.7	

* Includes 604 individuals in unspecified manufacturing industries.

	NonDurable Goods Manufacturing						Transportation, Communications, & Public Utilities					
	Total		Male		Female		Total		Male		Female	
Age	N	%	N	%	N	%	N	%	N	%	N	%
16-19	552	7.3	377	7.1	175	7.7	594	2.8	459	2.8	135	3.2
20-24	1,309	17.2	797	15.0	512	22.5	3,153	15.1	2,283	13.7	870	20.4
25-29	1,382	18.2	1,046	19.6	336	14.8	3,753	17.9	2,969	17.8	784	18.4
30-34	956	12.6	685	12.9	271	11.9	3,101	14.8	2,499	15.0	602	14.1
35-44	1,296	17.1	919	17.3	377	16.6	3,818	18.2	3,024	18.2	794	18.6
45-54	1,086	14.3	794	14.9	292	12.9	3,740	17.9	3,035	18.2	705	16.5
55-59	522	6.9	389	7.3	133	5.9	1,573	7.5	1,405	8.4	168	3.9
60-64	282	3.7	172	3.2	110	4.8	861	4.1	724	4.3	137	3.2
>65	208	2.7	142	2.7	66	2.9	342	1.6	267	1.6	75	1.7
Total	**7,593**	**100.0**	**5,321**	**100.0**	**2,272**	**100.0**	**20,935**	**99.9**	**16,665**	**100.0**	**4,270**	**100.0**
Row %	100.0		70.1		29.9		100.0		79.6		20.4	

Table 14 (Continued)

	Wholesale Trade						Retail Trade					
	Total		Male		Female		Total		Male		Female	
Age	N	%	N	%	N	%	N	%	N	%	N	%
16-19	738	5.4	610	5.5	128	4.8	10,257	20.5	4,392	19.1	5,865	21.6
20-24	2,379	17.3	1,782	16.1	597	22.6	9,894	19.8	4,243	18.5	5,651	20.9
25-29	2,393	17.4	1,951	17.6	442	16.7	6,287	12.5	3,352	14.6	2,935	10.8
30-34	1,760	12.8	1,468	13.2	292	11.1	4,508	9.0	2,390	10.4	2,118	7.8
35-44	2,603	19.0	2,103	19.0	500	18.9	6,547	13.1	2,924	12.7	3,623	13.4
45-54	2,149	15.7	1,722	15.5	427	16.2	6,399	12.8	2,714	11.8	3,685	13.6
55-59	850	6.2	687	6.2	163	6.2	2,541	5.1	1,075	4.7	1,466	5.4
60-64	512	3.7	450	4.1	62	2.3	1,960	3.9	980	4.3	980	3.6
$\geq$65	347	2.5	316	2.8	31	1.2	1,677	3.3	902	3.9	775	2.9
Total	**13,731**	**100.0**	**11,089**	**100.0**	**2,642**	**100.0**	**50,070**	**100.0**	**22,972**	**100.0**	**27,098**	**100.0**
Row %	100.0		80.8		19.2		100.0		45.9		54.1	

	Finance, Insurance, and Real Estate						Services					
	Total		Male		Female		Total		Male		Female	
Age	N	%	N	%	N	%	N	%	N	%	N	%
16-19	623	5.0	104	1.9	519	7.3	5,546	7.0	1,766	6.5	3,780	7.3
20-24	2,201	17.6	403	7.4	1,798	25.4	12,930	16.4	3,658	13.4	9,272	17.9
25-29	2,205	17.7	816	15.1	1,389	19.6	13,110	16.6	4,251	15.6	8,859	17.1
30-34	1,760	14.1	876	16.2	884	12.5	9,947	12.6	3,910	14.3	6,037	11.7
35-44	2,454	19.6	1,196	22.1	1,258	17.8	13,872	17.5	5,151	18.9	8,721	16.8
45-54	1,691	13.5	990	18.3	701	9.9	11,186	14.2	3,979	14.6	7,207	13.9
55-59	713	5.7	427	7.9	286	4.0	4,814	6.1	1,733	6.4	3,081	6.0
60-64	437	3.5	300	5.6	137	1.9	4,054	5.1	1,352	5.0	2,702	5.2
$\geq$65	409	3.3	298	5.5	111	1.6	3,562	4.5	1,439	5.3	2,123	4.1
Total	**12,493**	**100.0**	**5,410**	**100.0**	**7,083**	**100.0**	**79,021**	**100.0**	**27,239**	**100.0**	**51,782**	**100.0**
Row %	100.0		43.3		56.7		100.0		34.5		65.5	

Table 14 (Continued)

Age	Business and Repair Services 1/						Personal Services 2/					
	Total		Male		Female		Total		Male		Female	
	N	%	N	%	N	%	N	%	N	%	N	%
16-19	549	7.8	424	8.3	125	6.4	969	10.7	249	14.2	720	9.9
20-24	1,374	19.5	979	19.2	395	20.2	1,449	16.0	192	10.9	1,257	17.3
25-29	1,208	17.1	863	16.9	345	17.6	1,465	16.2	256	14.6	1,209	16.6
30-34	912	12.9	686	13.5	226	11.6	1,038	11.5	151	8.6	887	12.2
35-44	1,144	16.2	788	15.5	356	18.2	1,223	13.5	191	10.9	1,032	14.2
45-54	913	13.0	603	11.8	310	15.9	1,056	11.7	190	10.8	866	11.9
55-59	390	5.5	288	5.7	102	5.2	581	6.4	192	10.9	389	5.3
60-64	278	3.9	219	4.3	59	3.0	526	5.8	109	6.2	417	5.7
≥65	284	4.0	246	4.8	38	1.9	729	8.1	225	12.8	504	6.9
Total	**7,052**	**99.9**	**5,096**	**100.0**	**1,956**	**100.0**	**9,036**	**99.9**	**1,755**	**99.9**	**7,281**	**100.0**
Row %	100.0		72.3		27.7		100.0		19.4		80.6	

Age	Professional and Related Services 3/						**Public Administration**					
	Total		Male		Female		Total		Male		Female	
	N	%	N	%	N	%	N	%	N	%	N	%
16-19	3,591	5.9	835	4.3	2,756	6.6	450	3.2	252	3.2	198	3.3
20-24	9,750	15.9	2,267	11.7	7,483	17.9	1,693	12.1	768	9.6	925	15.4
25-29	10,232	16.7	3,019	15.5	7,213	17.2	2,284	16.3	1,045	13.1	1,239	20.6
30-34	7,884	12.9	3,004	15.4	4,880	11.7	2,198	15.7	1,443	18.1	755	12.6
35-44	11,316	18.5	4,094	21.0	7,222	17.3	2,797	20.0	1,628	20.4	1,169	19.5
45-54	9,074	14.8	3,108	16.0	5,966	14.2	2,393	17.1	1,429	17.9	964	16.1
55-59	3,755	6.1	1,199	6.2	2,556	6.1	1,027	7.4	641	8.0	386	6.4
60-64	3,222	5.2	1,011	5.2	2,211	5.3	620	4.4	402	5.0	218	3.6
≥65	2,456	4.0	916	4.7	1,540	3.7	516	3.7	367	4.6	149	2.5
Total	**61,280**	**100.0**	**19,453**	**100.0**	**41,827**	**100.0**	**13,978**	**99.9**	**7,975**	**99.9**	**6,003**	**100.0**
Row %	100.0		31.7		68.3		100.0		57.1		42.9	

Source: "Detailed Population Characteristics; North Dakota," 1980 Census of Population, Volume 1, Chapter D, Part 36, PC80-1-D36, November 1983.

1/ **Business and Repair Services** includes establishments providing services to dwellings, commercial research and data processing, protective services, auto and other repair services.

2/ **Personal Services** includes hotels and motels, cleaning, and garment services, barber shops and dressmaking shops, etc.

3/ **Professional and Related Services** refers to offices of health practitioners, hospitals, nursing facilities, legal services, museums and art galleries, day-care services, colleges, etc.

Table 15
Nonagricultural Job Insurance Covered Wage and Salary Employment by Industry and County, 1986 Annual Average*

	Mining	Const.	Mfg.	Trans.,** Comm., Ut.	Whole. Trade	Retail Trade	Fin., Ins., RE	Service	Govt.***	Total**** Number	Total**** Percent
REGION I											
Williams	1,382	344	260	631	799	1,916	440	1,971	1,456	9,200	
Divide	28	19	7	11	52	139	58	224	175	712	
McKenzie	425	92	20	177	135	235	71	330	444	1,928	
TOTAL	**1,835**	**455**	**287**	**819**	**986**	**2,290**	**569**	**2,525**	**2,075**	**11,840**	5.2
ROW PERCENT	15.5	3.8	2.4	6.9	8.3	19.4	4.8	21.3	17.5	99.9	
REGION II											
Ward	125	992	761	954	1,674	4,988	996	4,898	4,035	19,422	
Bottineau	120	57	64	105	156	410	102	462	599	2,074	
Burke	125	13	12	77	44	114	45	25	257	710	
McHenry	45	79	60	80	108	155	68	105	420	1,121	
Mountrail	51	52	127	87	146	318	96	433	500	1,809	
Pierce	9	61	55	111	152	355	95	480	276	1,594	
Renville	60	24	5	7	77	92	27	157	212	661	
TOTAL	**535**	**1,278**	**1,084**	**1,421**	**2,357**	**6,432**	**1,429**	**6,560**	**6,299**	**27,391**	12.0
ROW PERCENT	2.0	4.7	4.0	5.2	8.6	23.5	5.2	23.9	23.0	100.1	
REGION III											
Ramsey	0	173	155	163	382	1,281	217	1,178	1,164	4,714	
Benson	0	43	491	15	81	114	68	328	514	1,656	
Cavalier	0	67	15	103	152	309	91	295	347	1,378	
Towner	0	23	206	55	79	142	60	191	214	970	
Eddy	10	9	14	14	86	134	45	232	214	758	
Rolette	7	113	461	77	105	394	119	699	1,394	3,368	
TOTAL	**17**	**428**	**1,342**	**427**	**885**	**2,374**	**600**	**2,923**	**3,847**	**12,844**	5.6
ROW PERCENT	0.1	3.3	10.4	3.3	6.9	18.5	4.7	22.8	30.0	100.0	
REGION IV											
Grand Forks	36	1,526	1,485	1,251	1,421	6,592	1,084	5,834	6,721	25,950	
Nelson	0	40	28	44	169	184	70	296	289	1,119	
Walsh	19	162	165	222	383	903	244	790	1,976	4,862	
Pembina	4	232	438	156	224	574	119	643	602	2,993	
TOTAL	**59**	**1,960**	**2,116**	**1,673**	**2,197**	**8,253**	**1,517**	**7,563**	**9,588**	**34,924**	15.3
ROW PERCENT	0.1	5.6	6.1	4.8	6.3	23.6	4.3	21.7	27.5	100.0	
REGION V											
Cass	9	2,574	3,766	3,269	5,935	10,410	3,716	13,364	8,039	51,083	
Traill	0	131	273	95	276	508	146	586	590	2,604	
Steele	0	13	37	40	58	57	41	19	156	421	
Ransom	0	38	131	48	167	317	89	388	372	1,550	
Richland	1	312	1,485	214	410	893	190	785	1,384	5,673	
Sargent	0	35	687	48	84	154	45	80	285	1,420	
TOTAL	**10**	**3,103**	**6,379**	**3,714**	**6,930**	**12,339**	**4,227**	**15,222**	**10,826**	**62,751**	27.5
ROW PERCENT	0	4.9	10.2	5.9	11.0	19.7	6.7	24.3	17.3	100.0	
REGION VI											
Stutsman	11	241	1,036	421	413	1,857	456	2,040	2,008	8,482	
Wells	24	84	27	29	179	360	101	381	341	1,526	
McIntosh	0	13	44	25	172	178	76	315	220	1,043	
Logan	0	18	10	11	106	104	23	85	164	522	
Foster	12	35	20	101	162	228	79	300	241	1,178	
Dickey	0	129	98	72	184	383	71	454	403	1,792	
LaMoure	0	10	29	57	190	186	97	115	348	1,031	
Barnes	6	207	169	102	347	865	169	835	881	3,581	
Griggs	0	19	39	17	115	103	57	176	176	702	
TOTAL	**53**	**756**	**1,472**	**835**	**1,868**	**4,264**	**1,129**	**4,701**	**4,782**	**19,857**	8.7
ROW PERCENT	0.2	3.8	7.4	4.2	9.4	21.5	5.7	23.7	24.1	100.0	
REGION VII											
Burleigh	159	1,071	1,172	2,041	1,805	5,977	1,263	7,814	6,420	27,721	
McLean	277	108	58	348	184	400	127	447	716	2,664	
Sheridan	2	13	6	6	35	44	33	21	145	305	
Kidder	2	7	12	20	40	56	37	95	213	482	
Emmons	0	65	37	29	117	159	51	201	320	980	
Morton	33	500	746	410	462	1,385	248	1,505	1,268	6,556	
Mercer	545	338	29	1,468	121	468	113	593	569	4,243	
Oliver	96	87	3	223	3	28	7	14	149	610	
Grant	1	10	3	24	54	107	48	103	202	552	
Sioux	1	31	7	9	20	52	16	202	402	740	
TOTAL	**1,116**	**2,230**	**2,073**	**4,578**	**2,841**	**8,676**	**1,943**	**10,995**	**10,404**	**44,853**	19.6
ROW PERCENT	2.5	5.0	4.6	10.2	6.3	19.3	4.3	24.5	23.2	99.9	
REGION VIII											
Stark	651	326	470	562	648	2,023	347	2,130	1,556	8,713	
Slope	23	3	0	2	1	4	2	3	59	96	
Hettinger	2	43	15	30	85	128	56	108	236	702	
Golden Valley	43	19	34	20	69	141	43	86	160	615	
Dunn	53	57	7	31	64	93	30	42	252	629	
Bowman	119	43	41	33	162	261	73	263	244	1,239	
Billings	168	17	0	12	2	31	0	125	126	480	
Adams	1	17	26	40	112	208	52	356	170	981	
TOTAL	**1,060**	**525**	**593**	**730**	**1,143**	**2,889**	**603**	**3,113**	**2,803**	**13,455**	5.9
ROW PERCENT	7.9	3.9	4.4	5.4	8.5	21.5	4.5	23.1	20.8	100.0	
MULTI COUNTY	25	107	27	6	149	3	1	91	53	462	0.2
STATE TOTAL	**4,709**	**10,836**	**15,369**	**14,204**	**19,353**	**47,521**	**12,016**	**53,691**	**50,678**	**228,377**	100.0
ROW PERCENT	2.1	4.7	6.7	6.2	8.5	20.8	5.3	23.5	22.2	100.0	

* By place of work.
** Excludes railroad employment.
*** Excludes military employment.
**** Totals may not add due to rounding.

Table 16
Nonagricultural Job Insurance Covered Wage and Salary Employment by Industry and County, 1985 Annual Average*

	Mining	Const.	Mfg.	Trans.,** Comm., Ut.	Whole. Trade	Retail Trade	Fin., Ins., RE	Service	Govt.***	Total****	
										Number	Percent
REGION I											
Williams	2,262	428	309	801	974	2.032	460	2.116	1,449	10,831	
Divide	62	19	8	12	54	146	62	226	178	767	
McKenzie	960	118	22	205	145	281	70	351	432	2.584	
TOTAL	**3,284**	**565**	**339**	**1,018**	**1,173**	**2,459**	**592**	**2,693**	**2,059**	**14,182**	**6.1**
ROW PERCENT	23.2	4.0	2.4	7.2	8.3	17.3	4.2	19.0	14.5	100.1	
REGION II											
Ward	145	970	809	959	1.708	5.096	998	4.674	3.982	19.341	
Bottineau	206	64	60	102	176	407	99	457	596	2.167	
Burke	162	25	11	85	39	124	46	36	257	785	
McHenry	60	75	68	85	106	171	71	122	396	1.154	
Mountrail	33	44	122	89	146	343	82	427	491	1.777	
Pierce	2	37	64	106	148	396	95	479	272	1,599	
Renville	87	27	4	16	65	96	28	171	212	706	
TOTAL	**695**	**1,242**	**1,138**	**1,442**	**2,388**	**6.633**	**1,419**	**6,366**	**6,206**	**27,529**	**11.9**
ROW PERCENT	2.5	4.5	4.1	5.2	8.7	24.1	5.2	23.1	22.5	99.9	
REGION III											
Ramsey	0	207	163	146	349	1.262	218	1,153	1,173	4.671	
Benson	1	38	512	16	85	112	65	253	516	1,598	
Cavalier	1	53	15	99	132	305	84	303	355	1,347	
Towner	0	25	166	53	80	159	64	194	207	948	
Eddy	12	13	20	14	87	123	49	240	196	754	
Rolette	5	115	466	72	121	393	123	739	1,365	3,399	
TOTAL	**19**	**451**	**1,342**	**400**	**854**	**2,354**	**603**	**2,882**	**3,812**	**12,717**	**5.5**
ROW PERCENT	0.1	3.5	10.6	3.1	6.7	18.5	4.7	22.7	30.0	99.9	
REGION IV											
Grand Forks	32	1,393	1.370	1,224	1.385	6.664	1,032	5,672	6.510	25.282	
Nelson	0	47	38	35	163	191	70	283	301	1.128	
Walsh	17	185	127	210	373	878	241	770	1,941	4.742	
Pembina	4	257	551	153	223	560	119	695	596	3.158	
TOTAL	**53**	**1,882**	**2,086**	**1,622**	**2,144**	**8,293**	**1,462**	**7,420**	**9,348**	**34,310**	**14.9**
ROW PERCENT	0.2	5.5	6.1	4.7	6.2	24.2	4.3	21.6	27.2	100.0	
REGION V											
Cass	15	2,638	3,692	3,109	6.107	10,046	3.672	12.565	7,905	49.749	
Traill	6	102	287	106	270	467	141	579	584	2.542	
Steele	0	12	39	41	72	69	41	19	164	457	
Ransom	0	58	104	50	164	315	90	386	367	1.534	
Richland	4	292	1,460	181	384	873	195	742	1,369	5.500	
Sargent	0	40	679	47	89	140	47	82	276	1.400	
TOTAL	**25**	**3,142**	**6,261**	**3,534**	**7,086**	**11.910**	**4,186**	**14,373**	**10,665**	**61,182**	**26.5**
ROW PERCENT	0.0	5.1	10.2	5.8	11.6	19.5	6.8	23.5	17.4	99.9	
REGION VI											
Stutsman	12	279	1,095	395	412	1,943	455	2,023	1.983	8.597	
Wells	28	99	29	34	201	358	101	364	335	1,549	
McIntosh	0	12	50	32	169	177	77	321	222	1.060	
Logan	0	27	12	11	117	88	23	85	164	527	
Foster	13	41	31	96	167	254	77	306	237	1.222	
Dickey	0	95	87	79	173	418	77	464	392	1.785	
LaMoure	2	19	29	59	188	192	104	122	336	1,051	
Barnes	2	186	126	96	371	869	159	782	873	3.464	
Griggs	0	14	32	17	116	102	56	167	175	679	
TOTAL	**57**	**772**	**1,491**	**819**	**1,914**	**4,401**	**1,129**	**4,634**	**4,717**	**19,934**	**8.6**
ROW PERCENT	0.3	3.9	7.5	4.1	9.6	22.1	5.7	23.2	23.7	100.1	
REGION VII											
Burleigh	165	1,180	1,215	2.174	1,918	5.833	1,284	7.548	6,357	27.674	
McLean	293	152	80	348	191	454	127	489	710	2.844	
Sheridan	2	15	7	6	36	44	36	31	143	320	
Kidder	2	8	17	21	34	61	37	101	204	485	
Emmons	0	73	38	28	119	153	50	215	315	991	
Morton	39	441	739	425	492	1,323	253	1.511	1.301	6.524	
Mercer	675	861	29	1.628	122	561	129	716	562	5,283	
Oliver	105	124	4	213	2	29	6	16	147	646	
Grant	3	11	4	17	58	123	45	131	198	590	
Sioux	0	9	8	9	18	52	15	216	378	705	
TOTAL	**1,284**	**2,874**	**2,141**	**4,869**	**2,990**	**8.633**	**1,982**	**10,974**	**10,315**	**46.062**	**20.0**
ROW PERCENT	2.8	6.2	4.6	10.6	6.5	18.7	4.3	23.8	22.4	99.9	
REGION VIII											
Stark	826	415	492	643	690	2.106	379	2,190	1,562	9.303	
Slope	36	2	0	0	0	4	0	4	60	106	
Hettinger	3	45	19	30	101	120	56	156	230	760	
Golden Valley	55	28	36	20	74	141	47	93	160	654	
Dunn	106	79	8	41	74	102	33	49	260	752	
Bowman	146	56	39	37	170	264	70	269	240	1.291	
Billings	219	17	0	18	1	29	0	127	122	533	
Adams	0	19	27	38	115	192	51	343	170	955	
TOTAL	**1,391**	**661**	**621**	**827**	**1,225**	**2,958**	**636**	**3,231**	**2,804**	**14,354**	**6.2**
ROW PERCENT	9.7	4.6	4.3	5.8	8.5	20.6	4.4	22.5	19.5	99.9	
MULTI COUNTY	76	93	32	9	168	6	3	48	52	487	0.2
STATE TOTAL	**6,884**	**11,682**	**15,451**	**14,540**	**19,942**	**47,647**	**12,012**	**52,621**	**49,978**	**230,757**	**99.9**
ROW PERCENT	3.0	5.1	6.7	6.3	8.6	20.6	5.2	22.8	21.7	100.0	

* By place of work.
** Excludes railroad employment.
*** Excludes military employment.
**** Totals may not add due to rounding.

Table 17
Nonagricultural Job Insurance Covered Wage and Salary Employment by Industry and County, 1984 Annual Average*

	Mining	Const.	Mfg.	Trans., ** Comm., Ut.	Whole. Trade	Retail Trade	Fin., Ins., RE	Service	Govt.***	Total****	
										Number	Percent
REGION I											
Williams	2,556	573	325	866	1,062	2,085	462	2,182	1,380	11,491	
Divide	79	15	9	11	63	146	54	219	178	774	
McKenzie	1,073	156	23	214	146	275	69	388	445	2,789	
TOTAL	**3,708**	**744**	**357**	**1,091**	**1,271**	**2,506**	**585**	**2,789**	**2,003**	**15,054**	6.5
ROW PERCENT	24.6	4.9	2.4	7.2	8.4	16.6	3.9	18.5	13.3	99.8	
REGION II											
Ward	141	1,081	857	930	1,780	5,134	972	4,671	3,843	19,409	
Bottineau	185	67	58	108	193	418	102	483	596	2,210	
Burke	175	15	11	88	47	120	46	45	250	797	
McHenry	64	71	95	103	111	162	69	115	403	1,193	
Mountrail	26	64	83	86	165	347	79	397	488	1,735	
Pierce	7	33	83	101	158	434	88	474	275	1,653	
Renville	91	25	3	38	63	88	29	174	205	716	
TOTAL	**689**	**1,356**	**1,190**	**1,454**	**2,517**	**6,703**	**1,385**	**6,359**	**6,060**	**27,713**	12.0
ROW PERCENT	2.5	4.9	4.3	5.2	9.1	24.2	5.0	22.9	21.9	100.0	
REGION III											
Ramsey	0	216	162	155	356	1,250	212	1,154	1,162	4,667	
Benson	5	61	509	16	93	113	64	199	522	1,582	
Cavalier	1	55	13	106	142	310	85	292	351	1,355	
Towner	0	30	137	50	115	156	61	198	211	958	
Eddy	14	29	18	15	83	134	49	249	185	776	
Rolette	7	82	336	75	133	400	112	738	1,299	3,182	
TOTAL	**27**	**473**	**1,175**	**417**	**922**	**2,363**	**583**	**2,830**	**3,730**	**12,520**	5.4
ROW PERCENT	0.1	3.8	9.4	3.3	7.4	18.9	4.7	22.6	29.8	100.0	
REGION IV											
Grand Forks	40	1,190	1,215	1,193	1,386	6,476	1,022	5,568	6,283	24,373	
Nelson	11	49	50	30	165	215	69	275	307	1,171	
Walsh	19	185	118	205	364	865	240	717	1,837	4,550	
Pembina	4	178	502	135	234	555	117	641	618	2,984	
TOTAL	**74**	**1,602**	**1,885**	**1,563**	**2,149**	**8,111**	**1,448**	**7,201**	**9,045**	**33,078**	14.3
ROW PERCENT	0.2	4.8	5.7	4.7	6.5	24.5	4.4	21.8	27.3	99.9	
REGION V											
Cass	21	2,615	3,795	2,960	6,104	9,449	3,508	12,064	7,727	48,243	
Traill	11	83	295	110	280	489	145	590	566	2,569	
Steele	0	18	39	37	78	74	45	16	166	473	
Ransom	0	53	117	51	171	310	92	378	364	1,536	
Richland	2	300	1,674	190	385	875	196	739	1,353	5,714	
Sargent	0	50	656	52	90	138	49	84	277	1,396	
TOTAL	**34**	**3,119**	**6,576**	**3,400**	**7,108**	**11,335**	**4,035**	**13,871**	**10,453**	**59,931**	25.9
ROW PERCENT	0.1	5.2	11.0	5.7	11.9	18.9	6.7	23.1	17.4	100.0	
REGION VI											
Stutsman	17	317	1,050	458	379	1,956	443	1,956	1,941	8,517	
Wells	28	112	31	34	206	374	97	355	331	1,568	
McIntosh	0	14	60	35	182	163	75	330	220	1,079	
Logan	0	19	11	10	117	106	22	75	166	526	
Foster	12	52	29	93	163	263	73	329	235	1,249	
Dickey	3	97	98	105	190	385	77	475	394	1,824	
LaMoure	1	23	37	54	217	213	99	128	338	1,110	
Barnes	7	187	100	101	366	860	165	762	853	3,401	
Griggs	0	12	35	19	124	114	58	156	176	694	
TOTAL	**68**	**833**	**1,451**	**909**	**1,944**	**4,434**	**1,109**	**4,566**	**4,654**	**19,968**	8.6
ROW PERCENT	0.2	4.2	7.3	4.6	9.7	22.2	5.6	22.9	23.3	100.0	
REGION VII											
Burleigh	177	1,405	1,196	2,119	2,015	5,730	1,280	7,421	6,087	27,430	
McLean	273	229	87	355	216	456	123	512	696	2,947	
Sheridan	0	13	6	7	37	41	39	31	145	319	
Kidder	1	17	18	23	40	56	36	98	199	488	
Emmons	3	55	38	26	115	154	51	214	313	969	
Morton	37	386	791	423	500	1,356	252	1,526	1,255	6,526	
Mercer	598	2,533	27	1,482	148	638	126	830	560	6,942	
Oliver	100	84	3	194	2	32	7	15	148	585	
Grant	6	13	5	16	58	99	44	156	199	596	
Sioux	0	17	13	5	21	49	19	249	369	742	
TOTAL	**1,195**	**4,752**	**2,184**	**4,650**	**3,152**	**8,611**	**1,977**	**11,052**	**9,971**	**47,544**	20.6
ROW PERCENT	2.5	10.0	4.6	9.8	6.6	18.1	4.2	23.2	21.0	100.0	
REGION VIII											
Stark	923	467	502	674	714	2,166	407	2,308	1,529	9,690	
Slope	53	4	0	2	0	6	0	5	56	126	
Hettinger	12	44	21	29	107	124	55	161	227	780	
Golden Valley	33	34	41	53	75	110	47	124	154	671	
Dunn	132	87	11	55	73	124	34	53	270	839	
Bowman	189	60	37	42	175	264	71	257	229	1,324	
Billings	283	18	0	21	1	28	0	104	124	579	
Adams	1	17	29	40	126	194	53	329	170	959	
TOTAL	**1,626**	**731**	**641**	**916**	**1,271**	**3,016**	**667**	**3,341**	**2,759**	**14,968**	6.5
ROW PERCENT	10.9	4.9	4.3	6.1	8.5	20.1	4.5	22.3	18.4	100.0	
MULTI COUNTY	60	98	27	11	167	13	5	40	52	473	0.2
STATE TOTAL	**7,481**	**13,708**	**15,486**	**14,411**	**20,501**	**47,092**	**11,794**	**52,049**	**48,727**	231,249	100.0
ROW PERCENT	3.2	5.9	6.7	6.2	8.9	20.4	5.1	22.5	21.1	100.0	

* By place of work.
** Excludes railroad employment.
*** Excludes military employment.
**** Totals may not add due to rounding.

Table 18
Nonagricultural Job Insurance Covered Wage and Salary Employment by Industry and County, 1983 Annual Average*

	Mining	Cons't.	Mfg.	Trans..** Comm.. Ut.	Whole. Trade	Retail Trade	Fin., Ins.. RE	Service	Govt.***	Total**** Number	Total**** Percent
REGION I											
Williams	2,209	575	397	868	1,040	2,098	459	2,167	1,384	11,197	
Divide	96	18	10	10	67	159	54	210	166	790	
McKenzie	953	162	19	215	147	280	67	432	428	2,703	
TOTAL	**3,258**	**755**	**426**	**1,093**	**1,254**	**2,537**	**580**	**2,809**	**1,978**	**14,690**	**6.4**
ROW PERCENT	22.2	5.1	2.9	7.4	8.5	17.3	3.9	19.1	13.5	99.9	
REGION II											
Ward	135	1,105	842	891	1,743	4,924	933	4,698	3,796	19,067	
Bottineau	171	76	61	107	192	398	99	495	596	2,195	
Burke	153	15	11	89	56	114	48	45	253	784	
McHenry	66	81	115	102	112	164	69	97	395	1,201	
Mountrail	32	75	76	79	185	344	76	400	527	1,794	
Pierce	3	42	84	92	177	425	85	455	269	1,632	
Renville	72	19	5	34	67	89	28	166	216	696	
TOTAL	**632**	**1,413**	**1,194**	**1,394**	**2,532**	**6,458**	**1,338**	**6,356**	**6,052**	**27,369**	**11.9**
ROW PERCENT	2.3	5.2	4.4	5.1	9.2	23.6	4.9	23.2	22.1	100.0	
REGION III											
Ramsey	0	236	150	140	376	1,229	198	1,167	1,131	4,627	
Benson	2	55	374	13	93	113	69	270	391	1,380	
Cavalier	0	67	25	97	140	306	87	283	350	1,355	
Towner	0	55	106	54	118	164	62	184	202	945	
Eddy	16	20	17	13	73	135	50	238	179	741	
Rolette	6	173	244	82	136	404	105	732	1,355	3,237	
TOTAL	**24**	**606**	**916**	**399**	**936**	**2,351**	**571**	**2,874**	**3,608**	**12,285**	**5.3**
ROW PERCENT	0.2	4.9	7.5	3.2	7.6	19.1	4.6	23.4	29.4	99.9	
REGION IV											
Grand Forks	33	1,185	1,239	1,293	1,360	6,187	979	5,492	6,287	24,055	
Nelson	0	47	49	30	165	228	69	281	314	1,183	
Walsh	15	222	135	208	360	864	240	709	1,679	4,432	
Pembina	1	189	530	141	223	552	119	621	607	2,983	
TOTAL	**49**	**1,643**	**1,953**	**1,672**	**2,108**	**7,831**	**1,407**	**7,103**	**8,887**	**32,653**	**14.2**
ROW PERCENT	0.2	5.0	6.0	5.1	6.5	24.0	4.3	21.7	27.2	100.0	
REGION V											
Cass	24	2,324	3,517	2,918	5,921	8,829	3,359	11,449	7,640	45,981	
Traill	12	66	298	105	251	467	147	575	562	2,483	
Steele	0	20	41	34	76	75	46	19	173	484	
Ransom	0	63	140	52	173	333	90	379	351	1,581	
Richland	6	289	1,431	202	399	871	193	716	1,345	5,452	
Sargent	0	32	611	49	90	140	45	86	279	1,332	
TOTAL	**42**	**2,794**	**6,038**	**3,360**	**6,910**	**10,715**	**3,880**	**13,224**	**10,350**	**57,313**	**25.0**
ROW PERCENT	0.1	4.9	10.5	5.9	12.0	18.7	6.8	23.1	18.0	100.0	
REGION VI											
Stutsman	9	382	1,010	466	429	1,876	436	1,935	1,904	8,447	
Wells	28	95	30	32	216	353	88	347	329	1,518	
McIntosh	3	14	66	36	180	178	70	324	224	1,095	
Logan	0	26	7	8	118	99	25	52	162	497	
Foster	14	61	33	88	165	273	70	323	239	1,266	
Dickey	1	92	98	97	183	393	79	483	401	1,827	
LaMoure	7	26	20	54	221	208	96	122	350	1,104	
Barnes	1	203	149	105	375	866	167	792	885	3,543	
Griggs	0	17	36	20	125	114	60	159	170	701	
TOTAL	**63**	**916**	**1,449**	**906**	**2,012**	**4,360**	**1,091**	**4,537**	**4,664**	**19,998**	**8.7**
ROW PERCENT	0.3	4.6	7.2	4.5	10.1	21.8	5.5	22.7	23.3	100.0	
REGION VII											
Burleigh	169	1,567	1,188	2,052	1,936	5,564	1,289	6,942	6,041	26,748	
McLean	269	294	75	353	212	474	119	518	678	2,992	
Sheridan	0	25	22	5	36	37	37	33	145	340	
Kidder	0	10	18	26	37	61	32	96	195	475	
Emmons	2	61	41	25	101	165	51	204	322	972	
Morton	42	485	804	464	494	1,355	253	1,486	1,264	6,647	
Mercer	577	5,742	30	1,143	173	607	128	759	512	9,671	
Oliver	99	70	1	195	3	31	7	13	148	567	
Grant	5	17	5	18	61	95	43	138	197	579	
Sioux	0	13	19	3	21	43	19	268	348	734	
TOTAL	**1,163**	**8,284**	**2,203**	**4,284**	**3,074**	**8,432**	**1,978**	**10,457**	**9,850**	**49,725**	**21.6**
ROW PERCENT	2.3	16.7	4.4	8.6	6.2	17.0	4.0	21.0	19.8	100.0	
REGION VIII											
Stark	975	528	502	694	702	2,279	418	2,297	1,496	9,891	
Slope	38	6	0	0	0	5	0	3	50	102	
Hettinger	4	50	25	32	123	127	58	167	226	812	
Golden Valley	24	20	39	22	77	108	46	136	158	630	
Dunn	159	92	10	58	73	138	33	49	251	863	
Bowman	215	65	31	40	181	257	70	252	224	1,335	
Billings	297	28	0	22	0	33	0	97	119	596	
Adams	2	37	30	37	127	180	49	302	175	939	
TOTAL	**1,714**	**826**	**637**	**905**	**1,283**	**3,127**	**674**	**3,303**	**2,699**	**15,168**	**6.6**
ROW PERCENT	11.3	5.4	4.2	6.0	8.5	20.6	4.4	21.8	17.8	100.0	
MULTI COUNTY	77	119	31	8	167	9	9	26	59	505	0.2
STATE TOTAL	**7,022**	**17,356**	**14,847**	**14,021**	**20,276**	**45,820**	**11,528**	**50,689**	**48,147**	**229,706**	**99.9**
ROW PERCENT	3.1	7.5	6.5	6.1	8.8	19.9	5.0	22.1	21.0	100.0	

* By place of work.
** Excludes railroad employment.
*** Excludes military employment.
**** Totals may not add due to rounding.

Table 19
Nonagricultural Job Insurance Covered Wage and Salary Employment by Industry and County, 1982 Annual Average*

	Mining	Const.	Mfg.	Trans..** Comm.. Ut.	Whole. Trade	Retail Trade	Fin.. Ins.. RE	Service	Govt.***	Total**** Number	Total**** Percent
REGION I											
Williams	3,115	906	525	985	1,382	2,405	492	2,398	1,371	13,579	
Divide	143	12	8	11	68	158	54	209	172	835	
McKenzie	1,408	258	23	234	170	355	58	440	392	3,338	
TOTAL	**4,666**	**1,176**	**556**	**1,230**	**1,620**	**2,918**	**604**	**3,047**	**1,935**	**17,752**	7.8
ROW PERCENT	26.3	6.6	3.1	6.9	9.1	16.4	3.4	17.2	10.9	99.9	
REGION II											
Ward	170	1,032	832	934	1,752	4,841	905	4,480	3,777	18,723	
Bottineau	155	68	88	113	215	399	102	481	579	2,200	
Burke	180	11	12	72	73	119	47	42	250	806	
McHenry	78	95	94	100	123	172	67	84	393	1,206	
Mountrail	76	69	72	76	172	388	75	437	526	1,891	
Pierce	4	49	85	81	184	427	80	438	267	1,615	
Renville	63	18	4	29	73	87	27	163	220	684	
TOTAL	**726**	**1,342**	**1,187**	**1,405**	**2,592**	**6,433**	**1,303**	**6,125**	**6,012**	**27,125**	11.9
ROW PERCENT	2.7	4.9	4.4	5.2	9.5	23.7	4.8	22.6	22.2	100.0	
REGION III											
Ramsey	0	211	148	159	406	1,156	190	1,098	1,062	4,430	
Benson	3	76	441	16	109	103	71	271	396	1,486	
Cavalier	0	59	25	102	152	292	89	284	337	1,340	
Towner	0	32	82	54	134	151	65	182	202	902	
Eddy	15	13	16	13	72	131	50	202	172	684	
Rolette	10	191	245	64	114	420	109	690	1,340	3,183	
TOTAL	**28**	**582**	**957**	**408**	**987**	**2,253**	**574**	**2,727**	**3,509**	**12,025**	5.3
ROW PERCENT	0.2	4.8	8.0	3.4	8.2	18.7	4.8	22.7	29.2	100.0	
REGION IV											
Grand Forks	36	1,122	1,234	1,332	1,341	5,985	988	5,187	6,192	23,417	
Nelson	0	57	44	28	177	216	71	278	317	1,188	
Walsh	15	208	153	202	374	891	243	718	1,540	4,344	
Pembina	0	147	574	160	234	528	116	592	597	2,948	
TOTAL	**51**	**1,534**	**2,005**	**1,722**	**2,126**	**7,620**	**1,418**	**6,775**	**8,646**	**31,897**	14.0
ROW PERCENT	0.2	4.8	6.3	5.4	6.7	23.9	4.4	21.2	27.1	100.0	
REGION V											
Cass	14	1,996	3,377	2,946	5,804	8,593	3,187	10,767	7,459	44,143	
Traill	9	69	314	117	306	440	145	597	544	2,541	
Steele	0	22	37	35	81	77	49	13	169	483	
Ransom	0	167	76	48	188	331	83	355	340	1,588	
Richland	4	230	1,381	228	456	869	183	671	1,280	5,302	
Sargent	0	36	667	46	95	128	44	97	281	1,394	
TOTAL	**27**	**2,520**	**5,852**	**3,420**	**6,930**	**10,438**	**3,691**	**12,500**	**10,073**	**55,451**	24.3
ROW PERCENT	0.0	4.5	10.6	6.2	12.5	18.8	6.7	22.5	18.2	100.0	
REGION VI											
Stutsman	4	286	968	503	486	1,846	441	1,866	1,910	8,310	
Wells	28	70	30	27	224	340	87	337	333	1,476	
McIntosh	1	68	62	34	174	186	68	309	229	1,131	
Logan	0	24	12	6	120	83	24	51	155	475	
Foster	14	68	45	94	161	265	86	317	241	1,291	
Dickey	1	61	100	95	201	368	80	454	388	1,748	
LaMoure	1	16	24	57	234	210	95	115	354	1,106	
Barnes	0	203	174	108	410	859	171	816	853	3,594	
Griggs	0	21	42	17	120	127	55	151	164	697	
TOTAL	**49**	**817**	**1,457**	**941**	**2,130**	**4,284**	**1,107**	**4,416**	**4,627**	**19,828**	8.7
ROW PERCENT	0.2	4.1	7.4	4.8	10.7	21.6	5.6	22.3	23.3	100.0	
REGION VII											
Burleigh	183	1,415	1,155	2,068	1,927	5,408	1,305	6,633	5,948	26,042	
McLean	250	302	72	351	211	468	117	512	666	2,949	
Sheridan	21	14	25	5	34	33	34	29	142	337	
Kidder	0	6	19	22	41	58	32	93	192	463	
Emmons	0	154	37	29	115	172	48	207	315	1,077	
Morton	58	497	821	502	496	1,396	244	1,405	1,196	6,615	
Mercer	568	3,392	26	630	167	427	101	584	472	6,367	
Oliver	109	127	3	195	2	26	9	15	152	638	
Grant	7	14	4	14	48	124	42	128	191	572	
Sioux	3	12	32	6	28	41	10	247	411	790	
TOTAL	**1,199**	**5,933**	**2,194**	**3,822**	**3,069**	**8,153**	**1,942**	**9,853**	**9,685**	**45,850**	20.1
ROW PERCENT	2.6	12.9	4.8	8.3	6.7	17.8	4.2	21.5	21.1	99.9	
REGION VIII											
Stark	1,391	1,034	531	808	804	2,538	433	2,456	1,408	11,403	
Slope	55	1	0	0	0	5	0	1	48	110	
Hettinger	26	64	24	27	128	140	57	156	229	851	
Golden Valley	50	23	39	35	71	155	43	149	149	714	
Dunn	308	218	11	101	90	142	34	75	245	1,224	
Bowman	267	56	19	40	187	265	66	236	221	1,357	
Billings	413	51	0	20	2	39	0	84	106	715	
Adams	19	40	30	35	132	181	45	309	160	951	
TOTAL	**2,529**	**1,487**	**654**	**1,066**	**1,414**	**3,465**	**678**	**3,466**	**2,566**	**17,325**	7.6
ROW PERCENT	14.6	8.6	3.8	6.1	8.2	20.0	3.9	20.0	14.8	100.0	
MULTI COUNTY	153	249	46	63	182	24	11	61	61	850	0.3
STATE TOTAL	**9,428**	**15,640**	**14,908**	**14,077**	**21,050**	**45,588**	**11,328**	**48,970**	**47,114**	**228,103**	100.0
ROW PERCENT	4.1	6.9	6.5	6.2	9.2	20.0	5.0	21.5	20.6	100.0	

* By place of work.
** Excludes railroad employment.
*** Excludes military employment.
**** Totals may not add due to rounding.

Table 20
Nonagricultural Job Insurance Covered Wage and Salary Employment by Industry and County, 1981 Annual Average*

	Mining	Const.	Mfg.	Trans.,** Comm., Ut.	Whole. Trade	Retail Trade	Fin., Ins., RE	Service	Govt.***	Total****	
										Number	Percent
REGION I											
Williams	3,645	1,142	528	962	1,285	2,183	446	2,246	1,240	13,677	
Divide	169	12	9	8	69	161	47	192	180	847	
McKenzie	1,713	338	18	222	157	344	49	468	378	3,687	
TOTAL	**5,527**	**1,492**	**555**	**1,192**	**1,511**	**2,688**	**542**	**2,906**	**1,798**	**18,211**	
ROW PERCENT	30.3	8.2	3.0	6.5	8.3	14.8	3.0	16.0	9.9	100.0	8.0
REGION II											
Ward	247	1,132	893	952	1,769	4,681	920	4,385	3,786	18,765	
Bottineau	193	93	100	119	218	403	100	434	585	2,245	
Burke	145	18	12	65	74	131	43	32	254	774	
McHenry	78	142	55	105	127	175	67	84	408	1,241	
Mountrail	68	98	86	69	142	381	76	416	527	1,863	
Pierce	4	55	120	96	166	404	86	452	280	1,663	
Renville	100	21	4	42	76	81	27	167	220	738	
TOTAL	**835**	**1,559**	**1,270**	**1,448**	**2,572**	**6,256**	**1,319**	**5,970**	**6,060**	**27,289**	
ROW PERCENT	3.1	5.7	4.7	5.3	9.4	22.9	4.8	21.9	22.2	100.0	12.1
REGION III											
Ramsey	0	227	123	165	396	1,172	190	1,060	1,076	4,409	
Benson	2	101	370	18	113	114	70	313	417	1,518	
Cavalier	0	52	27	101	159	290	89	304	344	1,366	
Towner	0	45	78	57	141	150	64	184	209	928	
Eddy	16	20	10	14	82	143	48	181	188	702	
Rolette	5	161	245	65	116	422	108	781	1,322	3,225	
TOTAL	**23**	**606**	**853**	**420**	**1,007**	**2,291**	**569**	**2,823**	**3,556**	**12,148**	
ROW PERCENT	0.2	5.0	7.0	3.5	8.3	18.8	4.7	23.2	29.3	100.0	5.4
REGION IV											
Grand Forks	40	1,224	1,174	1,385	1,353	5,942	1,025	4,978	6,153	23,274	
Nelson	0	90	55	25	184	213	69	284	332	1,252	
Walsh	34	244	116	191	359	865	227	756	1,369	4,161	
Pembina	0	136	627	206	240	541	116	564	591	3,021	
TOTAL	**74**	**1,694**	**1,972**	**1,807**	**2,136**	**7,561**	**1,437**	**6,582**	**8,445**	**31,708**	
ROW PERCENT	0.2	5.3	6.2	5.7	6.8	23.9	4.5	20.8	26.6	100.0	14.0
REGION V											
Cass	25	2,231	3,628	2,882	5,814	8,500	3,224	10,050	7,747	44,101	
Traill	3	68	286	117	319	416	142	567	565	2,483	
Steele	2	26	37	46	85	82	49	14	166	507	
Ransom	0	79	33	51	214	348	82	311	346	1,464	
Richland	4	270	1,442	234	447	899	184	639	1,303	5,422	
Sargent	0	30	810	47	89	116	43	85	274	1,494	
TOTAL	**34**	**2,704**	**6,236**	**3,377**	**6,968**	**10,361**	**3,724**	**11,666**	**10,401**	**55,471**	
ROW TOTAL	0.1	4.9	11.2	6.1	12.6	18.7	6.7	21.0	18.7	100.0	24.5
REGION VI											
Stutsman	3	341	1,023	534	514	1,846	446	1,832	1,948	8,487	
Wells	29	74	26	36	240	345	80	350	350	1,530	
McIntosh	10	39	73	29	168	183	60	307	241	1,110	
Logan	1	30	12	4	129	83	23	55	181	518	
Foster	12	74	49	93	160	259	80	298	253	1,278	
Dickey	0	72	117	90	216	398	83	449	407	1,832	
LaMoure	1	28	22	64	236	211	97	123	366	1,148	
Barnes	0	220	156	114	420	881	171	768	884	3,614	
Griggs	3	19	75	20	124	123	53	144	176	735	
TOTAL	**57**	**897**	**1,553**	**984**	**2,207**	**4,329**	**1,093**	**4,326**	**4,806**	**20,252**	
ROW PERCENT	0.3	4.4	7.7	4.9	10.9	21.4	5.4	21.3	23.7	100.0	8.9
REGION VII											
Burleigh	223	1,506	1,214	1,982	1,885	5,327	1,302	6,341	6,166	25,946	
McLean	230	266	60	341	227	472	112	509	673	2,890	
Sheridan	2	15	15	2	35	55	34	25	149	332	
Kidder	1	10	18	22	48	59	33	94	199	484	
Emmons	3	98	33	25	113	169	48	194	318	1,001	
Morton	71	526	746	473	587	1,441	248	1,339	1,303	6,734	
Mercer	528	1,887	27	513	161	409	93	479	445	4,542	
Oliver	139	85	2	196	3	25	9	8	149	616	
Grant	5	12	12	15	51	106	41	134	197	573	
Sioux	0	18	26	6	33	37	8	298	419	845	
TOTAL	**1,202**	**4,423**	**2,153**	**3,575**	**3,143**	**8,100**	**1,928**	**9,421**	**10,018**	**43,963**	
ROW PERCENT	2.7	10.1	4.9	8.1	7.2	18.4	4.4	21.4	22.8	100.0	19.4
REGION VIII											
Stark	1,295	794	548	712	785	2,408	198	2,271	1,367	10,378	
Slope	71	0	0	0	0	9	0	1	47	128	
Hettinger	28	68	23	27	125	139	53	143	227	833	
Golden Valley	84	40	35	11	70	193	41	132	141	747	
Dunn	349	137	9	72	129	150	31	73	248	1,198	
Bowman	282	60	14	39	177	258	62	236	231	1,359	
Billings	587	74	0	9	5	39	0	90	98	902	
Adams	2	43	27	39	129	179	42	311	165	937	
TOTAL	**2,698**	**1,216**	**656**	**909**	**1,420**	**3,375**	**627**	**3,257**	**2,524**	**16,682**	
ROW PERCENT	16.2	7.3	3.9	5.5	8.5	20.2	3.8	19.5	15.1	100.0	7.4
MULTI-COUNTY	282	172	30	47	146	10	10	97	72	866	0.4
STATE TOTAL	**10,732**	**14,763**	**15,278**	**13,759**	**21,110**	**44,971**	**11,249**	**47,048**	**47,680**	226,590	100.0
ROW PERCENT	4.7	6.5	6.7	6.1	9.3	19.9	5.0	20.8	21.0	100.0	

* By place of work.
** Excludes railroad employment.
*** Excludes military employment.
**** Totals may not add due to rounding.

Table 21
Nonagricultural Job Insurance Covered Wage and Salary Employment by Industry and County, 1980 Annual Average*

	Mining	Const.	Mfg.	Trans.,** Comm., Ut.	Whole. Trade	Retail Trade	Fin. Ins., RE	Services	Govt.***	Total**** Number	Total**** Percent
REGION I											
Williams	2,175	767	481	780	976	2,013	362	1,855	1,225	10,634	
Divide	56	16	8	8	68	164	43	171	179	713	
McKenzie	1,146	218	16	164	145	247	43	429	356	2,764	
TOTAL	**3,377**	**1,001**	**505**	**952**	**1,189**	**2,424**	**448**	**2,455**	**1,760**	**14,111**	
ROW PERCENT	23.9	7.1	3.6	6.8	8.4	17.2	3.2	17.4	12.4	100.0	6.2
REGION II											
Ward	218	1,320	909	930	1,687	4,882	925	4,020	3,868	18,759	
Bottineau	98	81	90	102	197	430	95	415	588	2,096	
Burke	96	15	13	61	80	123	43	42	268	741	
McHenry	41	93	45	113	124	186	58	97	427	1,184	
Mountrail	57	94	87	77	131	388	72	425	558	1,889	
Pierce	2	60	102	86	157	407	76	462	280	1,632	
Renville	84	20	5	31	73	93	26	160	227	719	
TOTAL	**596**	**1,683**	**1,251**	**1,400**	**2,449**	**6,509**	**1,295**	**5,621**	**6,216**	**27,020**	
ROW PERCENT	2.2	6.2	4.6	5.2	9.1	24.1	4.8	20.8	23.0	100.0	11.8
REGION III											
Ramsey	0	258	122	182	375	1,360	185	1,042	1,110	4,634	
Benson	2	66	365	22	121	118	66	272	418	1,450	
Cavalier	1	52	47	101	155	289	90	319	372	1,426	
Towner	0	83	17	55	132	154	59	180	210	890	
Eddy	19	26	10	16	86	155	46	164	198	720	
Rolette	4	157	256	71	108	411	101	662	1,331	3,101	
TOTAL	**26**	**642**	**817**	**447**	**977**	**2,487**	**547**	**2,639**	**3,639**	**12,221**	
ROW PERCENT	0.2	5.2	6.7	3.6	8.0	20.4	4.5	21.6	29.8	100.0	5.4
REGION IV											
Grand Forks	28	1,323	1,219	1,391	1,235	6,138	1,047	4,571	6,105	23,057	
Nelson	0	73	57	32	177	203	68	279	341	1,230	
Walsh	23	240	132	163	351	958	225	721	1,296	4,109	
Pembina	0	119	580	215	219	525	106	572	649	2,985	
TOTAL	**51**	**1,755**	**1,988**	**1,801**	**1,982**	**7,824**	**1,446**	**6,143**	**8,391**	**31,381**	
ROW PERCENT	0.2	5.6	6.3	5.7	6.3	24.9	4.6	19.6	26.8	100.0	13.7
REGION V											
Cass	7	2,591	3,507	2,707	5,508	8,950	3,151	9,341	7,480	43,242	
Traill	6	69	330	125	295	429	136	544	562	2,496	
Steele	0	32	38	48	88	81	49	21	168	525	
Ransom	0	76	80	60	183	385	84	302	355	1,525	
Richland	3	281	1,335	213	431	922	192	654	1,269	5,300	
Sargent	0	46	793	46	101	110	41	84	268	1,489	
TOTAL	**16**	**3,095**	**6,083**	**3,199**	**6,606**	**10,877**	**3,653**	**10,946**	**10,102**	**54,577**	
ROW PERCENT	0.0	5.7	11.1	5.9	12.1	19.9	6.7	20.1	18.5	100.0	23.9
REGION VI											
Stutsman	14	436	1,064	508	557	1,710	453	1,751	1,968	8,461	
Wells	14	68	28	46	239	351	75	333	377	1,531	
McIntosh	0	14	84	24	169	180	59	294	257	1,081	
Logan	0	35	15	5	127	102	25	59	198	566	
Foster	14	96	47	96	161	265	76	281	273	1,309	
Dickey	0	83	141	81	232	404	76	473	407	1,897	
LaMoure	1	32	28	68	238	218	96	126	366	1,173	
Barnes	1	280	136	124	469	939	159	736	939	3,783	
Griggs	0	29	73	25	117	138	55	135	192	764	
TOTAL	**44**	**1,073**	**1,616**	**977**	**2,309**	**4,307**	**1,074**	**4,188**	**4,977**	**20,565**	
ROW PERCENT	0.2	5.2	7.9	4.8	11.2	20.9	5.2	20.4	24.2	100.0	9.0
REGION VII											
Burleigh	280	1,916	1,353	1,981	1,789	5,488	1,275	6,013	5,875	25,970	
McLean	198	405	56	336	231	479	105	532	693	3,035	
Sheridan	1	25	18	2	32	57	36	29	166	366	
Kidder	1	28	18	25	54	78	32	92	221	549	
Emmons	1	106	37	28	118	175	47	174	323	1,009	
Morton	120	675	725	496	571	1,528	244	1,340	1,448	7,147	
Mercer	506	2,246	31	437	159	418	81	438	418	4,734	
Oliver	132	173	3	170	7	31	8	10	140	674	
Grant	14	13	9	18	52	113	40	138	201	598	
Sioux	0	40	28	8	27	36	10	283	420	852	
TOTAL	**1,253**	**5,627**	**2,278**	**3,501**	**3,040**	**8,403**	**1,878**	**9,049**	**9,905**	**44,934**	
ROW PERCENT	2.8	12.5	5.1	7.8	6.8	18.7	4.2	20.1	22.0	100.0	19.7
REGION VIII											
Stark	709	726	576	604	681	2,294	379	2,012	1,314	9,295	
Slope	103	0	0	0	0	13	1	3	49	169	
Hettinger	42	62	30	32	104	165	49	145	238	867	
Golden Valley	87	29	32	19	67	168	38	121	138	699	
Dunn	300	95	7	70	122	135	28	55	252	1,064	
Bowman	250	66	15	37	168	276	57	225	235	1,329	
Billings	613	73	0	0	3	33	0	90	109	921	
Adams	14	58	60	45	152	170	37	294	177	1,007	
TOTAL	**2,118**	**1,109**	**720**	**807**	**1,297**	**3,254**	**589**	**2,945**	**2,512**	**15,351**	
ROW PERCENT	13.8	7.2	4.7	5.3	8.4	21.2	3.8	19.2	16.4	100.0	6.7
MULTI COUNTY	1,338	1,735	940	870	984	170	81	767	1,290	8,175	3.6
STATE TOTAL	**8,819**	**17,720**	**16,198**	**13,954**	**20,833**	**46,255**	**11,011**	**44,753**	**48,792**	**228,335**	
ROW PERCENT	3.8	7.8	7.1	6.1	9.1	20.3	4.8	19.6	21.4	100.0	100.0

* By place of residence.
** Excludes railroad employment.
*** Excludes military employment.
**** Totals may not add due to rounding.

Table 22
Industry of Employed Persons by Class of Worker and Sex for North Dakota, 1980
Total--16 Years and Older

	Total	Priv. Wage & Salary Workers	Government Workers				Self-Employed Workers	Unpaid Family Workers
			Total	Federal	State	Local		
TOTAL	272,620	172,938	49,480	11,822	16,988	20,670	46,814	3,388
Agriculture	41,487	7,738	412	179	183	50	31,058	2,279
Mining	6,029	5,905	16	12	0	4	106	2
Construction	18,999	13,890	2,298	212	1,129	957	2,702	109
Manufacturing	15,877	15,002	368	122	163	83	448	59
Nondurable Goods	7,593	7,122	211	30	142	39	214	46
Canned & Preserved Products & Beverages	804	804	0	0	0	0	0	0
Apparel & Other Finished Textile Products	167	155	0	0	0	0	12	0
Printing & Publishing & Allied Industries	2,350	2,167	54	18	28	8	95	34
Durable Goods	7,680	7,287	157	92	21	44	223	13
Stone, Clay, Glass & Concrete Products	510	489	0	0	0	0	19	2
Fabricated Metal Industries	585	560	0	0	0	0	25	0
Machinery, Except Electrical	4,023	3,921	30	9	7	14	72	0
Office, Accounting, and Computing Machines	66	66	0	0	0	0	0	0
Not specified manufacturing industries	604	593	0	0	0	0	11	0
Trans., Comm., & Public Utilities	20,935	16,336	3,707	2,498	159	1,050	841	51
Railroads	3,430	3,361	69	53	12	4	0	0
Trucking Service and Warehousing	4,873	4,051	48	17	7	24	744	30
U.S. Postal Service	2,231	0	2,231	2,231	0	0	0	0
Air Transportation	473	364	90	13	0	77	18	1
Communications	3,878	3,769	104	59	30	15	2	3
Electric & Gas Utilities	3,832	3,624	208	84	26	98	0	0
Wholesale Trade	13,731	13,010	64	28	10	26	599	58
Retail Trade	50,070	44,817	501	205	180	116	4,203	549
Hardware & Building Materials--Retailing	3,030	2,673	18	2	0	16	294	45
Auto Dealers & Auto Supply Stores	4,796	4,620	0	0	0	0	164	12
Gasoline Service Stations	3,163	2,749	9	2	0	7	350	55
Eating and Drinking Places	13,990	12,529	255	80	111	64	1,040	166
Finance, Insurance & Real Estate	12,493	10,765	894	458	283	153	806	28
Bank & Credit Agencies	5,796	5,235	537	287	210	40	16	8
Insurance	4,008	3,369	198	131	59	8	426	15
Other Finance & Real Estate	2,689	2,161	159	40	14	105	364	5
Business & Repair Services	7,052	4,870	447	88	269	90	1,670	65
Commercial Research & Management & Data Processing Services	910	620	164	43	98	23	113	13
Automotive Repair & Services	2,270	1,675	7	2	0	5	563	25
Personal Services	9,036	6,811	49	19	13	17	2,129	47
Hotels & Lodging Places	4,190	3,128	39	19	11	9	1,011	12
Barber & Beauty Shops	1,811	1,112	0	0	0	0	692	7
Entertainment & Recreational Services	1,653	1,191	245	72	32	141	204	13
Professional & Related Services	61,280	32,603	26,501	1,970	10,845	13,686	2,048	128
Health Services	23,831	19,476	3,731	838	1,959	934	584	40
Hospitals	13,965	11,162	2,718	759	1,374	585	69	16
Educational Services	27,118	5,482	21,353	865	8,494	11,994	266	17
Elementary & Secondary Schools	17,875	3,856	13,993	596	2,047	11,350	26	0
Government	13,993	0	13,993	596	2,047	11,350	0	0
Colleges and Universities	8,374	1,458	6,901	219	6,307	375	3	12
Government	6,901	0	6,901	219	6,307	375	0	0
Social Services, Religious & Membership Organizations	6,275	4,634	1,108	144	304	660	489	44
Legal, Engineering, & Other Professional Services	4,056	3,011	309	123	88	98	709	27
Public Administration	13,978	0	13,978	5,959	3,722	4,297	0	0

SOURCE: "1980 Census of Population; Detailed Population Characteristics," PC80-1-D36, North Dakota, Vol. 1, Chapter D, November 1983 (1972 SIC).

Table 22 (Continued)
Industry of Employed Persons by Class of Worker and Sex for North Dakota, 1980
Males—16 Years and Older

	Total	Priv. Wage & Salary Workers	Government Workers				Self-Employed Workers	Unpaid Family Workers
			Total	Federal	State	Local		
TOTAL	163,666	97,930	24,057	6,666	8,225	9,166	40,110	1,569
Agriculture	37,507	6,813	290	119	139	32	29,040	1,364
Mining	5,594	5,476	11	7	0	4	105	2
Construction	17,467	12,807	2,031	174	955	902	2,586	43
Manufacturing	11,748	11,106	257	63	141	53	369	16
Nondurable Goods	5,321	4,978	165	18	123	24	170	8
Canned & Preserved Products & Beverages	564	564	0	0	0	0	0	0
Apparel & Other Finished Textile Products	111	106	0	0	0	0	5	0
Printing & Publishing & Allied Industries	1,307	1,188	30	10	18	2	83	6
Durable Goods	6,016	5,726	92	45	18	29	190	8
Stone, Clay, Glass & Concrete Products	440	430	0	0	0	0	10	0
Fabricated Metal Industries	510	485	0	0	0	0	25	0
Machinery, Except Electrical	3,284	3,198	22	9	7	6	64	0
Office, Accounting, & Computing Machines	43	43	0	0	0	0	0	0
Not specified manufacturing industries	411	402	0	0	0	0	9	0
Trans., Comm., & Public Utilities	16,665	13,071	2,793	1,723	123	947	781	20
Railroads	3,274	3,205	69	53	12	4	0	0
Trucking Service and Warehousing	4,339	3,576	46	17	5	24	704	13
U.S. Postal Service	1,481	0	1,481	1,481	0	0	0	0
Air Transportation	400	297	84	7	0	77	18	1
Communications	2,227	2,149	76	45	24	7	2	0
Electric & Gas Utilities	3,218	3,043	175	84	15	76	0	0
Wholesale Trade	11,089	10,485	44	12	10	22	537	23
Retail Trade	22,972	20,294	114	38	28	48	2,505	59
Hardware & Building Materials--Retailing	2,201	1,966	9	2	0	7	226	0
Auto Dealers & Auto Supply Stores	4,164	4,012	0	0	0	0	149	3
Gasoline Service Stations	2,535	2,213	7	0	0	7	312	3
Eating and Drinking Places	3,898	3,295	44	9	12	23	534	25
Finance, Insurance & Real Estate	5,410	4,431	287	161	47	79	680	12
Bank & Credit Agencies	1,912	1,771	117	87	23	7	16	8
Insurance	2,013	1,546	73	56	17	0	392	2
Other Finance & Real Estate	1,485	1,114	97	18	7	72	272	2
Business & Repair Services	5,096	3,480	200	41	124	35	1,406	10
Commercial Research & Management & Data Processing Services	501	373	54	13	38	3	74	0
Automotive Repair & Services	2,044	1,491	7	2	0	5	540	6
Personal Services	1,755	1,182	13	2	7	4	551	9
Hotels & Lodging Places	842	724	13	2	7	4	100	5
Barber & Beauty Shops	356	139	0	0	0	0	215	2
Entertainment & Recreational Services	935	646	124	16	16	92	165	0
Professional & Related Services	19,453	8,139	9,918	790	4,715	4,413	1,385	11
Health Services	4,100	2,675	947	338	500	109	478	0
Hospitals	2,416	1,596	780	312	416	52	40	0
Educational Services	10,363	1,840	8,486	330	4,030	4,126	30	7
Elementary & Secondary Schools	5,955	1,165	4,772	165	732	3,875	18	0
Government	4,772	0	4,772	165	732	3,875	0	0
Colleges and Universities	4,276	619	3,647	140	3,279	228	3	7
Government	3,647	0	3,647	140	3,279	228	0	0
Social Services, Religious & Membership Organizations	2,616	2,069	255	28	116	111	288	4
Legal, Engineering, & Other Professional Services	2,374	1,555	230	94	69	67	589	0
Public Administration	7,975	0	7,975	3,520	1,920	2,535	0	0

SOURCE: "1980 Census of Population; Detailed Population Characteristics," PC80-1-D36, North Dakota, Vol. 1, Chapter D, November 1983 (1972 SIC).

Table 22 (Continued)
Industry of Employed Persons by Class of Worker and Sex for North Dakota, 1980
Females—16 Years and Older

	Total	Priv. Wage & Salary Workers	Government Workers				Self-Employed Workers	Unpaid Family Workers
			Total	Federal	State	Local		
TOTAL	108,954	75,008	25,423	5,156	8,763	11,504	6,704	1,819
Agriculture	3,980	925	122	60	44	18	2,018	915
Mining	435	429	5	5	0	0	1	0
Construction	1,532	1,083	267	38	174	55	116	66
Manufacturing	4,129	3,896	111	59	22	30	79	43
Nondurable Goods	2,272	2,144	46	12	19	15	44	38
Canned & Preserved Products & Beverages	240	240	0	0	0	0	0	0
Apparel & Other Finished Textile Products	56	49	0	0	0	0	7	0
Printing & Publishing & Allied Industries	1,043	979	24	8	10	6	12	28
Durable Goods	1,664	1,561	65	47	3	15	33	5
Stone, Clay, Glass & Concrete Products	70	59	0	0	0	0	9	2
Fabricated Metal Industries	75	75	0	0	0	0	0	0
Machinery, Except Electrical	739	723	8	0	0	8	8	0
Office, Accounting, & Computing Machines	23	23	0	0	0	0	0	0
Not specified manufacturing industries	193	191	0	0	0	0	2	0
Trans., Comm., & Public Utilities	4,270	3,265	914	775	36	103	60	31
Railroads	156	156	0	0	0	0	0	0
Trucking Service and Warehousing	534	475	2	0	2	0	40	17
U.S. Postal Service	750	0	750	750	0	0	0	0
Air Transportation	73	67	6	6	0	0	0	0
Communications	1,651	1,620	28	14	6	8	0	3
Electric & Gas Utilities	614	581	33	0	11	22	0	0
Wholesale Trade	2,642	2,525	20	16	0	4	62	35
Retail Trade	27,098	24,523	387	167	152	68	1,698	490
Hardware & Building Materials--Retailing	829	707	9	0	0	9	68	45
Auto Dealers & Auto Supply Stores	632	608	0	0	0	0	15	9
Gasoline Service Station	628	536	2	2	0	0	38	52
Eating and Drinking Places	10,092	9,234	211	71	99	41	506	141
Finance, Insurance & Real Estate	7,083	6,334	607	297	236	74	126	16
Bank & Credit Agencies	3,884	3,464	420	200	187	33	0	0
Insurance	1,995	1,823	125	75	42	8	34	13
Other Finance & Real Estate	1,204	1,047	62	22	7	33	92	3
Business & Repair Services	1,956	1,390	247	47	145	55	264	55
Commercial Research & Management & Data Processing Services	409	247	110	30	60	20	39	13
Automotive Repair & Services	226	184	0	0	0	0	23	19
Personal Services	7,281	5,629	36	17	6	13	1,578	38
Hotels & Lodging Places	3,348	2,404	26	17	4	5	911	7
Barber & Beauty Shops	1,455	973	0	0	0	0	477	5
Entertainment & Recreational Services	718	545	121	56	16	49	39	13
Professional & Related Services	41,827	24,464	16,583	1,180	6,130	9,273	663	117
Health Services	19,731	16,801	2,784	500	1,459	825	106	40
Hospitals	11,549	9,566	1,938	447	958	533	29	16
Educational Services	16,755	3,642	12,867	535	4,464	7,868	236	10
Elementary & Secondary Schools	11,920	2,691	9,221	431	1,315	7,475	8	0
Government	9,221	0	9,221	431	1,315	7,475	0	0
Colleges and Universities	4,098	839	3,254	79	3,028	147	0	5
Government	3,254	0	3,254	79	3,028	147	0	0
Social Services, Religious & Membership Organizations	3,659	2,565	853	116	188	549	201	40
Legal, Engineering, & Other Professional Services	1,682	1,456	79	29	19	31	120	27
Public Administration	6,003	0	6,003	2,439	1,802	1,762	0	0

SOURCE: "1980 Census of Population; Detailed Population Characteristics," PC80-1-D36, North Dakota, Vol. 1, Chapter D, November 1983 (1972 SIC).

Table 23
Industry of Employed Persons by Class of Worker and Sex for North Dakota, 1970
Total—16 Years and Older

	Total	Priv. Wage & Salary Workers	Government Workers				Self-Employed Workers	Unpaid Family Workers
			Total	Federal	State	Local		
TOTAL	**204,585**	**114,879**	**38,203**	**9,232**	**11,979**	**16,992**	**48,263**	**3,240**
Agriculture	43,575	6,589	317	161	109	47	34,625	2,044
Mining	1,638	1,569	0	0	0	0	65	4
Construction	11,165	6,657	2,571	290	1,261	1,020	1,856	81
Manufacturing	9,548	8,892	215	65	136	14	387	54
Nondurable Goods	5,644	5,213	141	0	127	14	251	39
Canned & Preserved Products & Beverages	825	811	5	0	0	5	9	0
Apparel & Other Finished Textile Products	63	54	0	0	0	0	9	0
Printing & Publishing & Allied Industries	1,693	1,539	6	0	6	0	135	13
Durable Goods	3,832	3,612	69	65	4	0	136	15
Stone, Clay, Glass & Concrete Products	376	360	0	0	0	0	16	0
Fabricated Metal Industries	345	330	4	0	4	0	11	0
Machinery, Except Electrical	1,566	1,477	0	0	0	0	80	9
Office, Accounting, and Computing Machines	21	21	0	0	0	0	0	0
Not specified manufacturing industries	72	67	5	0	5	0	0	0
Trans., Comm., & Public Utilities	15,964	11,327	3,884	2,917	123	844	739	14
Railroads	3,441	3,427	14	9	0	5	0	0
Trucking Service and Warehousing	2,801	2,250	6	0	0	6	542	3
U.S. Postal Service	2,665	0	2,665	2,665	0	0	0	0
Air Transportation	270	200	36	10	0	26	34	0
Communications	2,525	2,497	28	8	16	4	0	0
Electric & Gas Utilities	2,230	1,992	228	102	4	122	5	5
Wholesale Trade	9,005	8,402	21	0	16	5	541	41
Retail Trade	38,300	32,307	441	217	150	74	4,889	663
Hardware & Building Materials--Retailing	4,671	3,920	29	15	7	7	637	85
Motor Vehicle & Accessories Retailing	3,304	3,137	5	5	0	0	157	5
Gasoline Service Stations	3,037	2,355	30	25	0	5	632	20
Eating and Drinking Places	8,180	6,705	119	32	70	17	1,162	194
Finance, Insurance & Real Estate	7,431	6,397	549	329	121	99	462	23
Bank & Credit Agencies	3,337	2,999	329	226	78	25	9	0
Insurance	2,607	2,277	105	74	24	7	221	4
Other Finance & Real Estate	1,487	1,121	115	29	19	67	232	19
Business & Repair Services	3,933	2,574	242	79	86	77	1,064	53
Commercial Research & Management & Data Processing Services	441	280	88	41	31	16	73	0
Automobile Services	1,498	1,102	16	0	5	11	362	18
Other Business & Repair Services	1,888	1,091	138	38	50	50	624	35
Personal Services	9,434	7,509	33	10	13	10	1,764	128
Private Households	3,245	3,206	0	0	0	0	34	5
Hotels & Lodging Places	2,160	1,707	14	5	9	0	382	57
Barber & Beauty Shops	1,754	933	5	5	0	0	801	15
Entertainment & Recreational Services	1,285	1,048	94	19	31	44	128	15
Professional & Related Services	44,898	21,608	21,427	1,478	8,288	11,661	1,743	120
Health Services	15,509	12,251	2,572	502	1,449	621	668	18
Educational Services, Government	17,341	0	17,341	732	6,416	10,193	0	0
Educational Services, Private	4,289	3,915	0	0	0	0	353	21
Social Services, Religious & Membership Organizations	4,127	3,196	766	126	216	424	157	8
Legal, Engineering, & Other Professional Services	3,632	2,246	748	118	207	423	565	73
Public Administration	8,409	0	8,409	3,667	1,645	3,097	0	0

SOURCE: "1970 Census of Population; Detailed Population Characteristics," PC(1)-D36, North Dakota, August 1972 (1967 SIC).

Table 23 (Continued)
Industry of Employed Persons by Class of Worker and Sex for North Dakota, 1970
Male—16 Years and Older

	Total	Priv. Wage & Salary Workers	Government Workers				Self-Employed Workers	Unpaid Family Workers
			Total	Federal	State	Local		
TOTAL	**134,438**	**67,541**	**20,708**	**5,902**	**6,740**	**8,066**	**44,364**	**1,825**
Agriculture	41,808	6,219	282	138	105	39	33,695	1,612
Mining	1,577	1,508	0	0	0	0	65	4
Construction	10,492	6,241	2,396	279	1,123	994	1,809	46
Manufacturing	7,625	7,140	147	28	109	10	322	16
Nondurable Goods	4,183	3,857	110	0	100	10	206	10
Canned & Preserved Products & Beverages	556	546	5	0	0	5	5	0
Apparel & Other Finished Textile Products	34	29	0	0	0	0	5	0
Printing & Publishing & Allied Industries	1,140	1,036	6	0	6	0	98	0
Durable Goods	3,390	3,236	32	28	4	0	116	6
Stone, Clay, Glass & Concrete Products	358	348	0	0	0	0	10	0
Fabricated Metal Industries	319	304	4	0	4	0	11	0
Machinery, Except Electrical	1,442	1,372	0	0	0	0	70	0
Office, Accounting, and Computing Machines	21	21	0	0	0	0	0	0
Not specified manufacturing industries	52	47	5	0	5	0	0	0
Trans., Comm., & Public Utilities	13,116	9,409	3,004	2,116	108	780	703	0
Railroads	3,311	3,302	9	4	0	5	0	0
Trucking Service and Warehousing	2,497	1,956	6	0	0	6	535	0
U.S. Postal Service	1,884	0	1,884	1,884	0	0	0	0
Air Transportation	240	180	36	10	0	26	24	0
Communications	1,537	1,519	18	8	6	4	0	0
Electric & Gas Utilities	1,877	1,674	198	93	4	101	5	0
Wholesale Trade	7,518	6,983	10	0	10	0	520	5
Retail Trade	21,418	17,533	212	105	55	52	3,595	78
Hardware & Building Materials--Retailing	3,896	3,290	18	4	7	7	578	10
Motor Vehicle & Accessories Retailing	2,922	2,770	0	0	0	0	152	0
Gasoline Service Stations	2,793	2,172	25	20	0	5	587	9
Eating and Drinking Places	2,509	1,788	55	18	32	5	650	16
Finance, Insurance & Real Estate	3,774	3,037	313	191	54	68	420	4
Bank & Credit Agencies	1,318	1,133	180	134	35	11	5	0
Insurance	1,615	1,337	67	46	14	7	211	0
Other Finance & Real Estate	841	567	66	11	5	50	204	4
Business & Repair Services	3,207	2,055	148	30	59	59	980	24
Commercial Research & Management & Data Processing Services	273	164	67	20	31	16	42	0
Automobile Services	1,374	1,014	10	0	5	5	346	4
Other Business & Repair Services	1,478	800	71	10	23	38	587	20
Personal Services	2,205	1,276	5	5	0	0	904	20
Private Households	187	182	0	0	0	0	0	5
Hotels & Lodging Places	708	539	5	5	0	0	154	10
Barber & Beauty Shops	605	188	0	0	0	0	412	5
Entertainment & Recreational Services	713	545	52	10	15	27	116	0
Professional & Related Services	15,314	5,595	8,468	536	4,002	3,930	1,235	16
Health Services	2,875	1,575	727	164	484	79	573	0
Educational Services, Government	7,243	0	7,243	281	3,332	3,630	0	0
Educational Services, Private	1,416	1,377	0	0	0	0	35	4
Social Services, Religious & Membership Organizations	2,160	1,762	262	50	91	121	128	8
Legal, Engineering, & Other Professional Services	1,620	881	236	41	95	100	499	4
Public Administration	5,671	0	5,671	2,464	1,100	2,107	0	0

SOURCE: "1970 Census of Population; Detailed Population Characteristics," PC(1)-D36, North Dakota, August 1972 (1967 SIC).

Table 23 (Continued)
Industry of Employed Persons by Class of Worker and Sex for North Dakota, 1970
Female—16 Years and Older

			Government Workers					
	Total	Priv. Wage & Salary Workers	Total	Federal	State	Local	Self-Employed Workers	Unpaid Family Workers
TOTAL	**70,147**	**47,338**	**17,495**	**3,330**	**5,239**	**8,926**	**3,899**	**1,415**
Agriculture	1,767	370	35	23	4	8	930	432
Mining	61	61	0	0	0	0	0	0
Construction	673	416	175	11	138	26	47	35
Manufacturing	1,923	1,752	68	37	27	4	65	38
Nondurable Goods	1,461	1,356	31	0	27	4	45	29
Canned & Preserved Products & Beverages	269	265	0	0	0	0	4	0
Apparel & Other Finished Textile Products	29	25	0	0	0	0	4	0
Printing & Publishing & Allied Industries	553	503	0	0	0	0	37	13
Durable Goods	442	376	37	37	0	0	20	9
Stone, Clay, Glass & Concrete Products	18	12	0	0	0	0	6	0
Fabricated Metal Industries	26	26	0	0	0	0	0	0
Machinery, Except Electrical	124	105	0	0	0	0	10	9
Office, Accounting, and Computing Machines	0	0	0	0	0	0	0	0
Not specified manufacturing industries	20	20	0	0	0	0	0	0
Trans., Comm., & Public Utilities	2,848	1,918	880	801	15	64	36	14
Railroads	130	125	5	5	0	0	0	0
Trucking Service and Warehousing	304	294	0	0	0	0	7	3
U.S. Postal Service	781	0	781	781	0	0	0	0
Air Transportation	30	20	0	0	0	0	10	0
Communications	988	978	10	0	10	0	0	0
Electric & Gas Utilities	353	318	30	9	0	21	0	5
Wholesale Trade	1,487	1,419	11	0	6	5	21	36
Retail Trade	16,882	14,774	229	112	95	22	1,294	585
Hardware & Building Materials--Retailing	775	630	11	11	0	0	59	75
Motor Vehicle & Accessories Retailing	382	367	5	5	0	0	5	5
Gasoline Service Stations	244	183	5	5	0	0	45	11
Eating and Drinking Places	5,671	4,917	64	14	38	12	512	178
Finance, Insurance & Real Estate	3,657	3,360	236	138	67	31	42	19
Bank & Credit Agencies	2,019	1,866	149	92	43	14	4	0
Insurance	992	940	38	28	10	0	10	4
Other Finance & Real Estate	646	554	49	18	14	17	28	15
Business & Repair Services	726	519	94	49	27	18	84	29
Commercial Research & Management & Data Processing Services	168	116	21	21	0	0	31	0
Automobile Services	124	88	6	0	0	6	16	14
Other Business & Repair Services	410	291	67	28	27	12	37	15
Personal Services	7,229	6,233	28	5	13	10	860	108
Private Households	3,058	3,024	0	0	0	0	34	0
Hotels & Lodging Places	1,452	1,168	9	0	9	0	228	47
Barber & Beauty Shops	1,149	745	5	5	0	0	389	10
Entertainment & Recreational Services	572	503	42	9	16	17	12	15
Professional & Related Services	29,584	16,013	12,959	942	4,286	7,731	508	104
Health Services	12,634	10,676	1,845	338	965	542	95	18
Educational Services, Government	10,098	0	10,098	451	3,084	6,563	0	0
Educational Services, Private	2,873	2,538	0	0	0	0	318	17
Social Services, Religious & Membership Organizations	1,967	1,434	504	76	125	303	29	0
Legal, Engineering, & Other Professional Services	2,012	1,365	512	77	112	323	66	69
Public Administration	2,738	0	2,738	1,203	545	990	0	0

SOURCE: "1970 Census of Population; Detailed Population Characteristics," PC(1)-D36, North Dakota, August 1972 (1967 SIC).

APPENDIX IV

EARNINGS

Table 24
Average Monthly Earnings Per Covered Job by Industry for North Dakota
1981-1986

	1981		1982		1983		1984		1985		1986	
	$	% Change	$	% Change	$	% Change	$	% Change	$	% Change	$	% Change
Mining	2,061	13.4	2,116	2.7	2,089	-1.3	2,187	4.7	2,270	3.8	2,353	3.7
Construction	1,585	11.0	1,719	8.5	1,868	8.7	1,685	-9.8	1,565	-7.1	1,566	0.0
Manufacturing	1,301	9.1	1,397	7.4	1,421	1.7	1,495	5.2	1,557	4.1	1,577	1.3
Transportation, Communication, and Public Utilities	1,636	11.0	1,731	5.8	1,833	5.9	1,901	3.7	1,956	2.9	1,993	1.9
Wholesale Trade	1,395	8.1	1,462	4.8	1,496	2.3	1,535	2.6	1,579	2.9	1,607	1.8
Retail Trade	670	7.4	703	4.9	720	2.4	738	2.5	744	0.8	745	0.1
Finance, Insurance, and Real Estate	1,165	9.1	1,252	7.5	1,304	4.2	1,365	4.7	1,440	5.5	1,503	4.4
Services	928	13.3	999	7.7	1,049	5.0	1,101	5.0	1,129	2.5	1,161	2.8
Agriculture	912	10.1	950	4.2	945	-0.5	983	4.0	1,017	3.5	1,067	4.9
Government	1,181	15.0	1,284	8.7	1,311	2.1	1,346	2.7	1,405	4.4	1,445	2.8
Total	**1,148**	**12.4**	**1,217**	**6.0**	**1,253**	**3.0**	**1,274**	**1.7**	**1,299**	**2.0**	**1,314**	**1.2**

SOURCE: RAQ20J

Table 25
Covered Earnings by Industry for North Dakota
1984-1986

	1984	1985	Change 1984-85		1986	Change 1985-86	
	$	$	$	%	$	$	%
Mining	196,264,982	187,492,761	-8,772,221	-4.5	132,943,806	-54,548,955	-29.1
Construction	277,126,832	219,365,617	-57,761,215	-20.8	203,630,542	-15,735,075	-7.2
Manufacturing	277,838,301	288,687,774	10,849,473	3.9	290,902,068	2,214,294	0.8
Transportation, Communication, and Public Utilities	328,766,311	341,262,642	12,496,331	3.8	339,683,132	-1,579,510	-0.5
Wholesale Trade	377,649,506	377,739,100	89,594	0.1<	373,251,509	-4,487,591	-1.2
Retail Trade	416,868,728	425,310,721	8,441,993	2.0	424,825,145	-485,576	-0.1
Finance, Insurance, and Real Estate	193,139,462	207,651,047	14,511,585	7.5	216,712,751	9,061,704	4.4
Services	687,501,992	712,690,738	25,188,746	3.7	747,761,400	35,070,662	4.9
Agriculture	27,438,620	27,400,584	-38,036	-0.1	28,308,542	907,958	3.3
Government	787,221,235	842,918,218	55,696,983	7.1	878,501,232	35,583,014	4.2
Unclassifiable	-0-	-0-			7,121		
Total	**3,569,815,969**	**3,630,519,202**	**60,703,233**	**1.7**	**3,636,527,248**	**6,008,046**	**0.2**

SOURCE: RAQ20J

FIGURE 1

COUNTY EARNINGS AS A % OF STATE EARNINGS

1986 STATE AVERAGE EARNINGS ($1314/MONTH=100%)

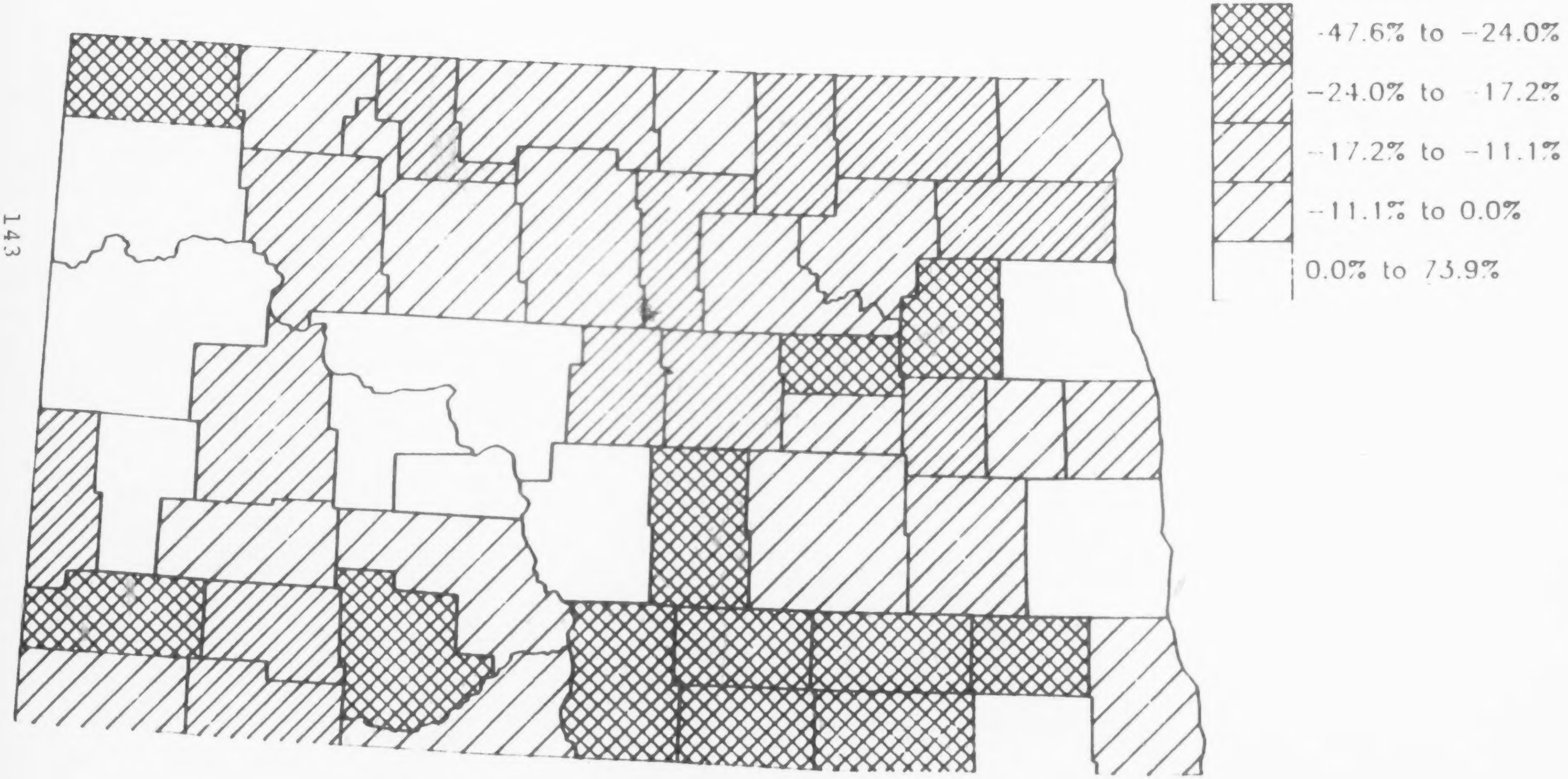


FIGURE 2

COUNTY EARNINGS % CHANGE 1985 TO 1986

STATEWIDE PERCENT CHANGE=1.2%

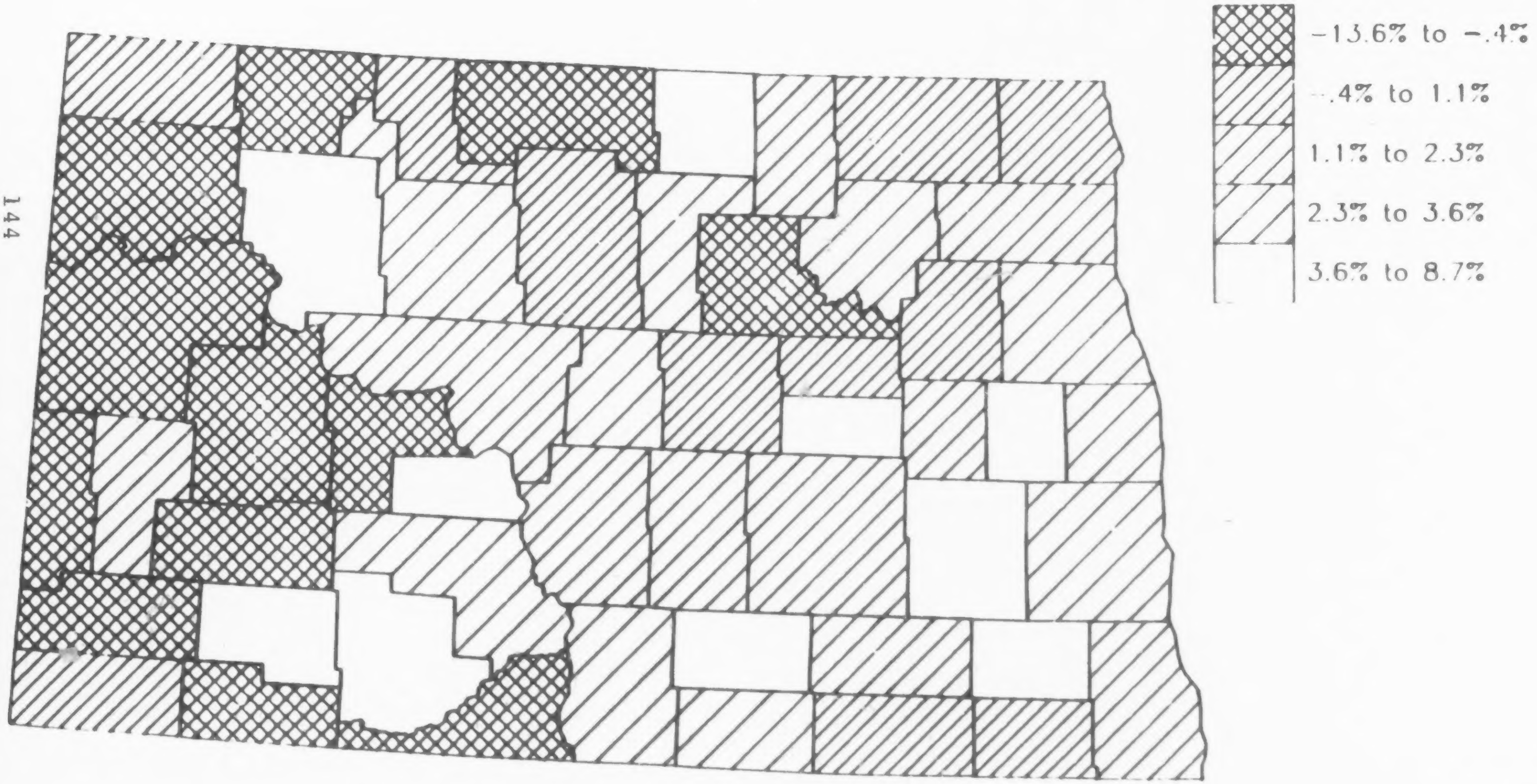


Table 26
Average Monthly Earnings Per Job Insurance Covered Job by County, 1980 to 1986

	1980	1981	1982	1983	1984	1985	1986	Percent Change 1985 to 1986
	$	$	$	$	$	$	$	
REGION I								
Williams	1,225	1,500	1,483	1,420	1,466	1,483	1,396	-5.9
Divide	812	1,040	1,073	961	996	959	967	0.8
McKenzie	1,367	1,535	1,542	1,441	1,509	1,521	1,404	-7.7
TOTAL	**1,232**	**1,486**	**1,475**	**1,399**	**1,449**	**1,462**	**1,372**	**-6.2**
REGION II								
Ward	993	1,092	1,136	1,166	1,187	1,225	1,255	2.4
Bottineau	902	1,027	1,045	973	1,075	1,119	1,115	-0.4
Burke	1,035	1,228	1,325	1,281	1,339	1,339	1,313	-1.9
McHenry	913	1,063	1,146	1,119	1,148	1,147	1,160	1.1
Mountrail	824	919	980	1,021	1,044	1,085	1,128	4.0
Pierce	824	918	927	967	990	1,026	1,063	3.6
Renville	919	1,048	1,000	1,000	1,102	1,069	1,073	0.4
TOTAL	**959**	**1,065**	**1,108**	**1,125**	**1,158**	**1,192**	**1,218**	**2.2**
REGION III								
Ramsey	842	928	1,004	1,025	1,053	1,067	1,103	3.4
Benson	852	942	1,015	1,039	1,155	1,179	1,162	-1.4
Cavalier	827	898	955	975	990	1,046	1,046	-0-
Towner	823	899	967	995	984	992	1,013	2.1
Eddy	775	821	874	887	920	927	927	-0-
Rolette	878	978	1,050	1,073	1,113	1,128	1,176	4.3
TOTAL	**845**	**931**	**1,002**	**1,023**	**1,060**	**1,081**	**1,106**	**2.3**
REGION IV								
Grand Forks	979	1,074	1,168	1,198	1,240	1,278	1,319	3.2
Nelson	766	822	873	894	953	967	974	0.7
Walsh	806	900	953	962	988	1,024	1,039	1.5
Pembina	899	996	1,088	1,114	1,171	1,264	1,270	0.5
TOTAL	**939**	**1,032**	**1,118**	**1,144**	**1,186**	**1,229**	**1,262**	**2.7**
REGION V								
Cass	1,108	1,231	1,304	1,343	1,371	1,403	1,436	2.4
Traill	863	931	987	1,006	1,033	1,101	1,131	2.7
Steele	958	1,052	1,063	1,071	1,129	1,130	1,197	5.9
Ransom	771	803	877	901	929	917	960	4.7
Richland	923	1,037	1,106	1,149	1,186	1,230	1,254	2.0
Sargent	1,036	1,139	1,201	1,151	1,335	1,430	1,444	1.0
TOTAL	**1,065**	**1,182**	**1,253**	**1,290**	**1,324**	**1,361**	**1,393**	**2.4**
REGION VI								
Stutsman	959	1,049	1,107	1,143	1,176	1,210	1,238	2.3
Wells	782	842	892	923	950	991	1,002	1.1
McIntosh	630	797	923	783	798	818	842	2.9
Logan	668	731	818	827	808	854	891	4.3
Foster	845	915	963	1,006	1,049	1,057	1,112	5.2
Dickey	746	821	885	896	946	990	998	0.8
LaMoure	739	787	855	894	919	954	966	1.3
Barnes	844	933	980	996	1,054	1,063	1,113	4.7
Griggs	805	855	898	946	969	987	1,007	2.0
TOTAL	**854**	**939**	**1,000**	**1,020**	**1,057**	**1,087**	**1,116**	**2.7**
REGION VII								
Burleigh	1,092	1,193	1,280	1,330	1,368	1,411	1,439	2.0
McLean	1,102	1,195	1,302	1,363	1,413	1,459	1,477	1.2
Sheridan	712	785	903	870	873	1,005	1,031	2.6
Kidder	780	808	870	879	915	953	966	1.4
Emmons	789	905	1,047	881	907	941	971	3.2
Morton	1,002	1,098	1,190	1,166	1,191	1,229	1,271	3.4
Mercer	991	1,684	1,903	2,262	2,184	2,123	2,114	-0.4
Oliver	1,610	1,817	1,834	1,982	2,078	2,202	2,285	3.8
Grant	749	804	839	853	880	876	952	8.7
Sioux	1,000	1,088	1,133	1,166	1,209	1,329	1,314	-1.1
TOTAL	**1,109**	**1,217**	**1,341**	**1,474**	**1,447**	**1,454**	**1,466**	**0.8**
REGION VIII								
Stark	1,010	1,175	1,293	1,207	1,253	1,263	1,250	-1.0
Slope	1,175	1,245	1,085	951	1,059	796	688	-13.6
Hettinger	806	883	912	917	955	974	1,043	7.1
Golden Valley	829	1,036	998	1,020	1,049	1,144	1,088	-4.9
Dunn	1,196	1,385	1,506	1,236	1,207	1,279	1,168	-8.7
Bowman	930	1,052	1,084	1,073	1,126	1,117	1,123	0.5
Billings	1,571	1,858	1,779	1,618	1,559	1,469	1,497	1.9
Adams	914	953	1,036	1,058	1,048	1,056	1,042	-1.3
TOTAL	**1,025**	**1,184**	**1,265**	**1,179**	**1,211**	**1,220**	**1,205**	**-1.2**
INA						1,786	1,726	-3.4
STATE TOTAL	**1,019**	**1,141**	**1,217**	**1,253**	**1,274**	**1,299**	**1,314**	**1.2**

SOURCE: North Dakota Employment and Wages, 1986

Table 27
Job Insurance Covered Employment, Average Monthly Earnings Per Job, and Total Earnings for 1978 to 1987II

		Employment			Earnings					
		Average Monthly Employment N	Percent Change From One Year Ago		Average Monthly Earnings $	Percent Change From One Year Ago		Total Earnings $	Percent Change From One Year Ago	
			Quarter	Annual		Quarter	Annual		Quarter	Annual
1978		207,316		N/A	854		N/A	2,125,301,378		N/A
1979		216,445		4.4	930		8.9	2,417,047,613		13.7
1980	I	212,894	3.8		977	10.0		623,963,809	14.2	
	II	226,811	4.9		994	9.8		676,114,063	15.2	
	III	224,145	1.6		1,018	9.0		684,732,041	10.8	
	IV	228,383	2.1		1,085	9.5		743,652,708	11.8	
		223,058		3.1	1,019		9.6	2,728,462,621		12.9
1981	I	218,030	2.4		1,066	9.1		697,334,024	11.8	
	II	228,571	0.8		1,124	13.1		770,510,024	14.0	
	III	231,594	3.3		1,152	13.2		800,185,024	16.9	
	IV	236,660	3.6		1,223	12.7		875,419,104	17.7	
		228,714		2.5	1,141		12.0	3,143,448,176		15.2
1982	I	224,495	3.0		1,184	11.1		797,237,368	14.3	
	II	230,752	1.0		1,217	8.3		842,529,920	9.3	
	III	231,558	0.1<		1,200	4.2		833,498,380	4.2	
	IV	231,598	-2.1		1,267	3.6		880,282,922	0.6	
		229,601		0.4	1,217		6.7	3,353,548,590		6.7
1983	I	222,492	-0.1		1,211	2.3		808,183,472	1.4	
	II	232,[illegible]77	0.6		1,251	2.8		871,019,578	3.4	
	III	234,879	1.4		1,261	5.1		888,514,078	6.6	
	IV	238,162	2.8		1,288	1.7		920,265,222	4.5	
		231,928		1.0	1,253		3.0	3,487,982,350		4.0
1984	I	227,397	2.2		1,266	4.5		863,980,953	6.9	
	II	234,999	1.2		1,269	1.4		894,683,782	2.7	
	III	235,071	0.1		1,251	-0.8		882,216,585	-0.7	
	IV	236,782	-0.6		1,3[illegible]	1.6		928,934,650	0.9	
		233,562		0.7	1,274		1.7	3,569,815,970		2.3
1985	I	226,716	-0.3		1,278	0.9		868,571,428	0.5	
	II	234,852	-0.1		1,308	3.1		921,271,308	3.0	
	III	234,261	-0.3		1,274	1.8		895,120,376	1.5	
	IV	236,124	-0.3		1,335	2.1		945,556,089	1.8	
		232,988		-0.2	1,299		2.0	3,630,519,201		1.7
1986	I	225,460	-0.5		1,301	1.8		879,748,593	1.4	
	II	232,603	-1.0		1,319	0.8		920,114,222	0.0	
	III	230,942	-1.4		1,286	0.9		890,912,432	0.5	
	IV	233,348	-1.2		1,351	1.2		945,752,001	0.0	
		230,588		-1.0	1,314		1.2	3,636,527,248		0.2
1987[P]	I	225,528	0.0		1,326	1.9		897,436,359	2.0	
	II	234,263	0.7		1,344	1.9		944,465,096	2.7	

[P] Preliminary

SOURCE: RAQ203 (9/28/87)

APPENDIX V

POVERTY

Table 28
Persons Receiving Food Stamps by County; First Quarter Average
1982-1987

	1982	1983	1984	1985	1986	1987	Percent Change 1982-83	1983-84	1984-85	1985-86	1986-87
REGION I											
Williams	478	1,078	867	844	1,169	1,695	125.5	-19.6	-2.7	38.5	45.0
Divide	53	73	104	94	99	108	37.7	42.5	-9.6	5.3	9.1
McKenzie	490	750	588	541	633	781	53.1	-21.6	-8.0	17.0	23.4
TOTAL	**1,021**	**1,901**	**1,559**	**1,479**	**1,901**	**2,584**	**86.2**	**-18.0**	**-5.1**	**28.5**	**35.9**
REGION II											
Ward	2,249	2,525	2,531	2,815	2,804	2,848	12.3	0.2	11.2	-0.4	1.6
Bottineau	396	571	459	504	511	612	44.2	-19.6	9.8	1.4	19.8
Burke	121	131	150	151	155	204	8.3	14.5	0.7	2.6	31.6
McHenry	472	479	447	515	577	619	1.5	-6.7	15.2	12.0	7.3
Mountrail	469	660	653	619	588	681	40.7	-1.1	-5.2	-5.0	15.8
Pierce	353	350	394	371	391	345	-0.8	12.6	-5.8	5.4	-11.8
Renville	61	69	51	65	82	79	13.1	-26.1	27.5	26.2	-3.7
TOTAL	**4,121**	**4,785**	**4,685**	**5,040**	**5,108**	**5,388**	**16.1**	**-2.1**	**7.6**	**1.3**	**5.5**
REGION III											
Ramsey	647	719	745	771	869	983	11.1	3.6	3.5	12.7	13.1
Benson	1,114	1,298	1,012	1,107	1,142	1,182	16.5	-22.0	9.4	3.2	3.5
Cavalier	392	381	386	393	341	359	-2.8	1.3	1.8	-13.2	5.3
Towner	192	251	246	259	251	241	30.7	-2.0	5.3	-3.1	-4.0
Eddy	229	237	223	239	288	265	3.5	-5.9	7.2	20.5	-8.0
Rolette	2,426	2,724	2,718	2,762	2,758	2,880	12.3	-0.2	1.6	-0.1	4.4
TOTAL	**5,000**	**5,610**	**5,330**	**5,531**	**5,649**	**5,910**	**12.2**	**-5.0**	**3.8**	**2.1**	**4.6**
REGION IV											
Grand Forks	2,811	3,194	2,556	2,683	2,801	2,584	13.6	-20.0	5.0	4.4	-7.7
Nelson	116	141	138	162	172	154	21.6	-2.1	17.4	6.2	-10.5
Walsh	510	673	710	687	724	673	32.0	5.5	-3.2	5.4	-7.0
Pembina	538	467	581	456	469	534	-13.2	24.4	-21.5	2.9	13.9
TOTAL	**3,975**	**4,475**	**3,985**	**3,988**	**4,166**	**3,945**	**12.6**	**-10.9**	**0.1**	**4.5**	**-5.3**
REGION V											
Cass	2,744	2,886	2,570	2,794	2,814	2,917	5.2	-10.9	8.7	0.7	3.7
Traill	275	372	369	355	306	335	35.3	-0.8	-3.8	-13.8	9.5
Steele	75	112	118	79	80	72	49.3	5.4	-33.1	1.3	-10.0
Ransom	322	355	369	397	426	393	10.2	3.9	7.6	7.3	-7.7
Richland	724	917	988	920	979	942	26.7	7.7	-6.9	6.4	-3.8
Sargent	295	365	332	344	324	290	23.3	-9.0	3.6	-5.8	-10.5
TOTAL	**4,436**	**5,007**	**4,746**	**4,889**	**4,929**	**4,949**	**12.9**	**-5.2**	**3.0**	**0.8**	**0.4**
REGION VI											
Stutsman	1,292	1,391	1,471	1,377	1,341	1,471	7.7	5.8	-6.4	-2.6	9.7
Wells	212	297	335	307	388	399	40.1	12.8	-8.4	26.4	2.8
McIntosh	299	345	325	230	241	253	15.4	-5.8	-29.2	4.8	5.0
Logan	295	287	266	240	218	224	-2.7	-7.3	-9.8	-9.2	2.9
Foster	186	173	196	180	179	218	-7.0	13.3	-8.2	-0.6	21.9
Dickey	433	513	569	492	563	566	18.5	10.9	-13.5	14.4	0.5
LaMoure	266	381	395	328	331	293	43.2	3.7	-17.0	0.9	-11.5
Barnes	520	715	712	776	799	788	37.5	-0.4	9.0	3.0	-1.4
Griggs	173	255	249	222	228	250	47.4	-2.4	-10.8	2.7	9.6
TOTAL	**3,676**	**4,357**	**4,518**	**4,152**	**4,288**	**4,462**	**18.5**	**3.7**	**-8.1**	**3.3**	**4.1**
REGION VII											
Burleigh	2,295	2,426	2,402	2,950	3,343	3,462	5.7	-1.0	22.8	13.3	3.6
McLean	575	626	621	572	629	657	8.9	-0.8	-7.9	10.0	4.5
Sheridan	153	212	240	266	303	318	38.6	13.2	10.8	13.9	5.0
Kidder	269	291	298	280	293	283	8.2	2.4	-6.0	4.6	-3.4
Emmons	350	375	381	323	307	338	7.1	1.6	-15.2	-5.0	10.1
Morton	1,557	1,566	1,659	1,948	2,079	2,058	0.6	5.9	17.4	6.7	-1.0
Mercer	484	303	276	351	376	369	-37.4	-8.9	27.2	7.1	-1.9
Oliver	87	67	111	79	97	81	-23.0	65.7	-28.8	22.8	-16.5
Grant	378	418	448	409	437	471	10.6	7.2	-8.7	6.8	7.8
Sioux	854	994	515	599	633	725	16.4	-48.2	16.3	5.7	14.5
TOTAL	**7,002**	**7,278**	**6,951**	**7,777**	**8,497**	**8,762**	**3.9**	**-4.5**	**11.9**	**9.3**	**3.1**
REGION VIII											
Stark	627	1,175	1,358	1,382	1,476	1,652	87.4	15.6	1.8	6.8	11.9
Hettinger	135	116	127	131	161	243	-14.1	9.5	3.1	22.9	50.9
Dunn	153	195	202	228	247	295	27.5	3.6	12.9	8.3	19.4
Bowman/Slope	82	147	167	152	211	304	79.3	13.6	-9.0	38.8	44.1
Billings/ Golden Valley	52	103	117	144	162	186	98.1	13.6	23.1	12.5	14.8
Adams	68	119	114	98	107	109	75.0	-4.2	-14.0	9.2	1.9
TOTAL	**1,117**	**1,855**	**2,085**	**2,135**	**2,364**	**2,789**	**66.1**	**12.4**	**2.4**	**10.7**	**18.0**
STATE TOTAL*	**30,349**	**35,267**	**33,857**	**34,992**	**36,904**	**38,789**	**16.2**	**-4.0**	**3.4**	**5.5**	**5.1**

*Totals may not add due to rounding.

Table 29
Characteristics of Persons Below the Poverty Level by Age and Sex and Race/Ethnicity 1980

Age	Below the Poverty Level			Below 125 Percent of the Poverty Level		
	Total	Male	Female	Total	Male	Female
16<	24,383	12,046	12,337	34,448	17,117	17,331
16-17	3,336	1,591	1,745	4,529	2,170	2,359
18-21	8,202	3,455	4,747	10,749	4,559	6,190
22-54	25,164	11,470	13,694	35,198	16,176	19,022
55-64	5,699	2,611	3,088	7,955	3,622	4,333
≥65	12,540	4,277	8,263	19,356	6,865	12,491
Total	79,324	35,450	43,874	112,235	50,509	61,726

Age	Below the Poverty Level		
	Total	American Indians	Other Minorities
16<	24,383	3,680	655
16-17	3,336	400	122
18-21	8,202	693	122
22-54	25,164	2,266	458
55-64	5,699	211	2
≥65	12,540	271	29
Total	79,324	7,521	1,388

Source: Summary Tape File 4, State Data Center, NDSU.

Table 30
Family Income in 1979 by Family Type

	Total	Median Income $	Less Than $5,000	$5,000 to $9,999	$10,000 to $14,999
Total, All Families	168,418	18,023	12,902	24,366	29,072
Male Householder, No Wife Present	5,651	16,083	506	1,017	1,050
With Own Children <18 Years	1,788	15,883	174	355	288
With Children <6 Years	621	12,297	93	144	113
Female Householder, No Spouse Present	13,270	9,605	2,966	3,930	2,706
In Labor Force	7,875	10,373	1,244	2,530	1,894
With Own Children <18 Years	5,573	9,199	1,077	2,039	1,309
With Children <6 Years	1,905	7,175	595	803	384
Not in Labor Force	5,332	7,897	1,722	1,400	812
With Own Children <18 Years	2,303	4,576	1,301	534	202
With Children <6 Years	1,250	3,913	899	244	69

Source: "Detailed Population Characteristics; North Dakota," 1980 Census of Population, Volume 1, Chapter D, Part 36, PC80-1-D36, November 1983.

Table 31
Poverty Status in 1979 of Persons With Public Assistance Income

	With Public Assistance Income in 1979			
	Total	Below Poverty Level	Rural	Below Poverty Level
Total Persons	28,152	10,768	15,201	5,875
Persons in Families	24,769	8,565	13,559	4,717
Householder	7,075	2,395	3,685	1,222
Female, No Spouse Present	2,853	1,558	1,173	614
Other	4,222	837	2,512	608
Related Children 18<	10,342	4,873	5,415	2,512
Children 5-17	7,255	3,115	3,896	1,658
Persons				
16<	9,222	4,574	4,723	2,299
16-21	3,172	976	1,765	615
22-54	8,055	2,671	4,100	1,363
55-64	2,300	642	1,399	412
>65	5,403	1,905	3,214	1,186

Source: "Detailed Population Characteristics; North Dakota," 1980 Census of Population, Volume 1, Chapter D, Part 36, PC80-1-D36, November 1983.

Table 32
Poverty Status in 1979 of Families and Persons

	Place of Residence				
		Inside	Outside	Rural	
	Total	SMSA's	SMSA's	Total	Farm
ALL INCOME LEVELS IN 1979					
FAMILIES	168,418	58,327	110,091	89,876	28,757
With Public Assistance Income	7,075	2,278	4,797	3,685	549
Income Above Poverty Level	4,680	1,544	3,136	2,463	448
Below Poverty Level Without Assistance	880	228	652	494	49
Female Householder, No Spouse Present	13,207	5,616	7,591	5,028	676
UNRELATED INDIVIDUALS	76,208	33,327	42,881	28,968	3,842
With Public Assistance Income	3,383	1,119	2,264	1,642	83
Income Above Poverty Level	1,180	414	766	484	38
Below Poverty Level Without Assistance	574	206	368	234	15
PERSONS	627,325	223,057	404,268	329,176	103,801
Related Children Under 18	189,131	65,157	123,974	103,678	33,775
Ages 18-64	364,604	138,616	225,988	180,321	60,070
Ages ≥65	73,590	19,284	54,306	45,177	9,956
INCOME IN 1979 BELOW POVERTY LEVEL					
FAMILIES	16,449	3,748	12,701	11,775	5,567
With Public Assistance Income	2,395	734	1,661	1,222	101
Householder Worked in 1979	11,899	2,791	9,108	8,662	5,035
With Related Children Under 18	11,197	2,777	8,420	7,698	3,973
With Children 5-17	8,602	1,946	6,656	6,410	3,423
Female Householder, No Spouse Present	3,519	1,339	2,180	1,461	99
Householder Worked in 1979	2,099	949	1,150	691	68
With Related Children Under 18	3,097	1,208	1,889	1,195	51
With Children Under 6	1,850	758	1,092	619	10
Householder ≥65	2,605	380	2,225	2,006	409
UNRELATED INDIVIDUALS	19,909	8,379	11,530	8,488	880
With Public Assistance Income	2,203	705	1,498	1,158	45
Worked in 1979	9,577	5,103	4,474	2,717	571
PERSONS	79,324	21,186	58,138	52,847	23,423
Related Children Under 18	27,069	6,148	20,921	19,735	10,141
Ages 18-64	39,715	12,196	27,519	24,765	12,293
Ages ≥65	12,540	2,842	9,698	8,347	989
INCOME IN 1979 BELOW 125 PERCENT OF THE POVERTY LEVEL					
FAMILIES	24,220	5,674	18,546	16,779	7,318
With Public Assistance Income	3,118	145	2,192	1,630	145
Householder Worked in 1979	17,671	4,246	13,425	12,333	6,638
With Related Children Under 18 Years	15,934	4,004	11,930	10,612	5,157
With Children 5 to 17	12,132	2,765	9,367	8,758	4,397
Female Householder, No Spouse Present	4,732	1,806	2,926	1,961	128
Householder Worked in 1979	2,986	1,326	1,660	998	84
With Related Children Under 18	3,978	1,555	2,423	1,525	65
With Children Under 6	2,218	911	1,307	747	12
UNRELATED INDIVIDUALS	25,864	10,546	15,318	11,047	1,105
With Public Assistance Income	2,548	809	1,739	1,313	49
Worked in 1979	12,534	6,386	6,148	3,764	709
PERSONS	112,235	29,781	82,454	73,231	30,450
Related Children Under 18	38,288	8,921	29,367	26,976	12,988
Ages 18-64	54,591	16,470	38,121	33,610	15,972
Ages ≥65	19,356	4,390	14,966	12,645	1,490

Source: "General Social and Economic Characteristics; North Dakota," 1980 Census of Population, Volume 1, Chapter C, Part 36, PC80-1-C36, July 1983.

APPENDIX VI

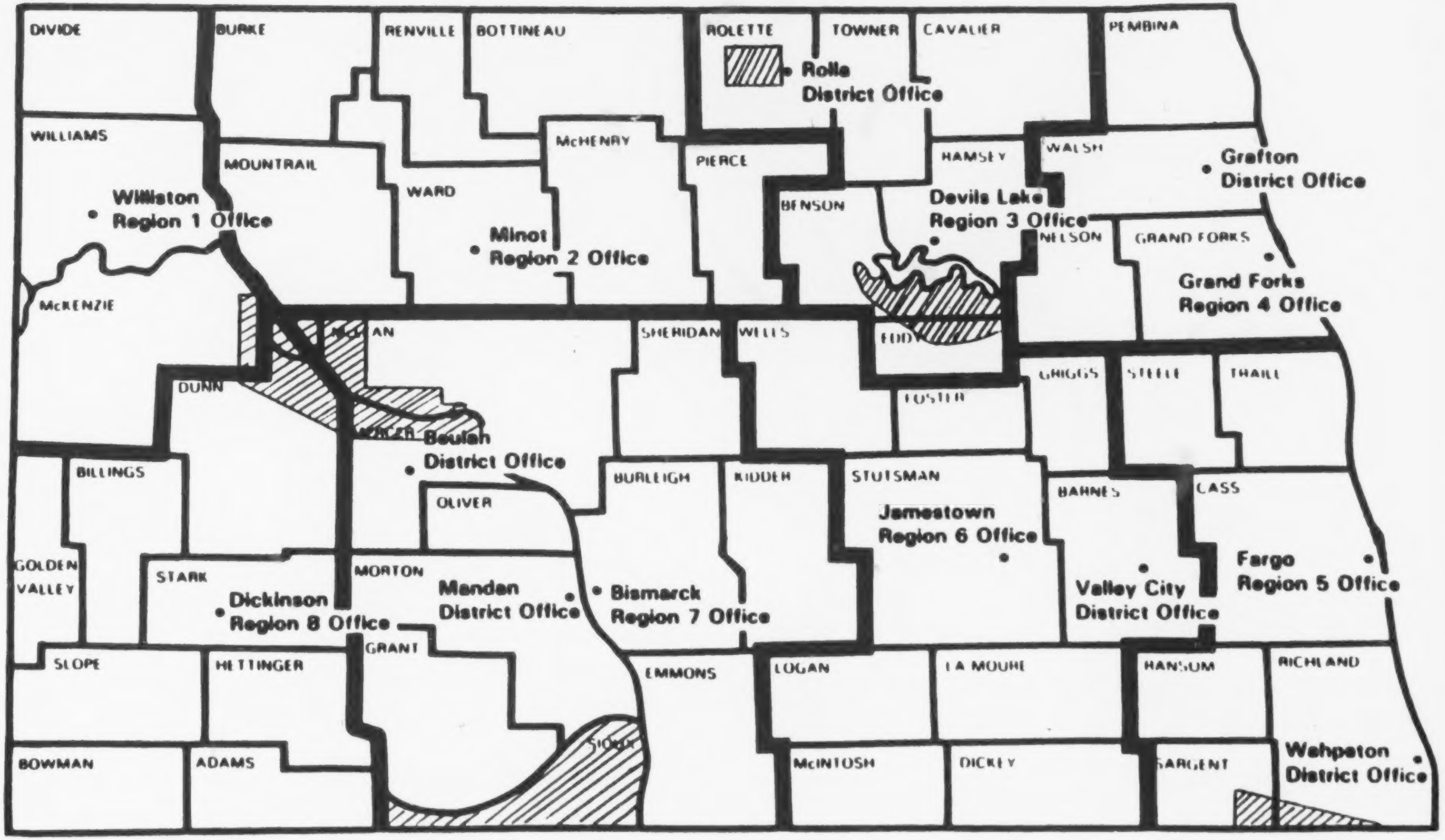
MAPS

Map 1

Map of North Dakota Counties, Planning Regions, Reservations and Major Cities

104° lon.

49° lat.



Reservations: ▨ Fort Berthold Fort Yates Turtle Mt. Fort Totten Sisseton

Map 2

Map Showing the Main Topographic Areas in North Dakota

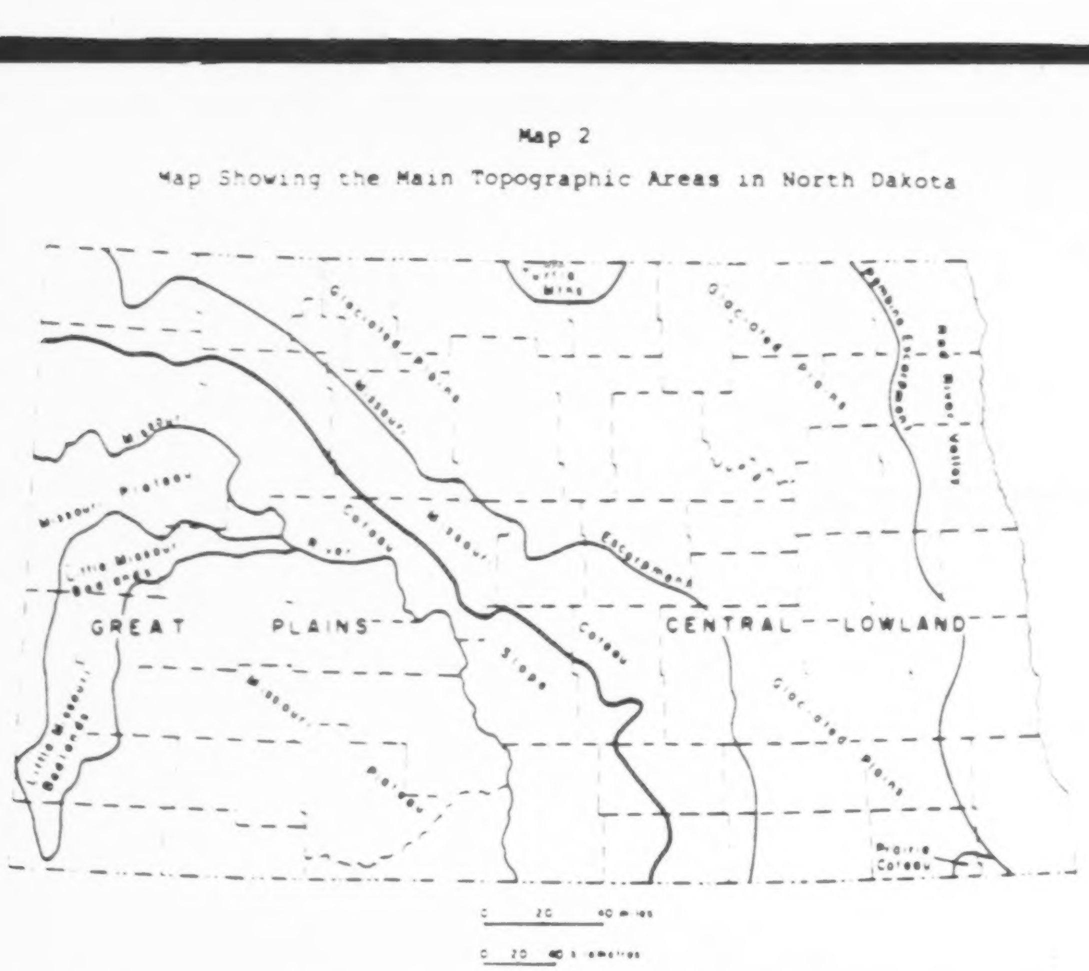


Figure 1. Map showing the main topographic areas in North Dakota. The term "gently sloping" refers to areas that have slopes of less than 8 percent (4° 35'). Local relief is defined as the maximum difference in elevation within any township-sized area.

EXPLANATION

CENTRAL LOWLAND

Red River Valley: Flat plain resulting from sedimentation on the floor of glacial Lake Agassiz; more than 95 percent of the area is gently sloping with local relief less than 25 feet in most places.

Pembina Escarpment: Steep, glacially-modified escarpment that marks the boundary between the Red River Valley and the Glaciated Plains.

Glaciated Plains: Rolling, glaciated landscape; more than 80 percent of the area is gently sloping with local relief generally less than 100 feet in most places, but ranging up to 100 to 300 feet in some places.

Prairie Coteau and Turtle Mountains: Hummocky, glaciated irregular plains that resulted from collapse of superglacial sediment; gentle slopes characterize 50 to 80 percent of the area and local relief ranges from 300 to 500 feet.

Missouri Escarpment: Steep, glacially-modified escarpment that marks the boundary between the Glaciated Plains and the Missouri Coteau.

Missouri Coteau: Hummocky, glaciated irregular plains that resulted from collapse of superglacial sediment; gentle slopes characterize 50 to 80 percent of the area and local relief ranges from 100 to 300 feet.

GREAT PLAINS

Coteau Slope: Rolling to hilly plains east of the Missouri River that have both erosional and glacial landforms; gentle slopes characterize 50 to 80 percent of the area and local relief ranges from 300 to 500 feet.

Missouri Plateau: Rolling to hilly plains except in badlands areas; some evidence of glaciation near the Missouri River; gentle slopes characterize 50 to 80 percent of the area and local relief ranges from 300 to 500 feet.

Little Missouri Badlands: Rugged, deeply-eroded, hilly area along the Little Missouri River; gentle slopes characterize 20 to 50 percent of the area and local relief is commonly over 500 feet.

SOURCE: The Face of North Dakota, The Geologic Story, by John P. Bluemle, Educational Series 11, North Dakota Geological Survey.

BIBLIOGRAPHY

Agricultural Credit Conditions Survey, Research Department, Federal Reserve Bank of Minneapolis, (Second Quarter) 1987.

Agricultural Outlook, USDA/Economics Research Service, November 1987a.

-----USDA/Economics Research Service, October 1987b.

Annual Energy Outlook 1986, With Projections to 2000, Department of Energy/Energy Information Administration, February 1987.

Bluemle, John, "Oil Production," NDGS Newsletter, North Dakota Geological Survey, June 1987.

Bradley, Ralph (North Dakota), U.S. Regional Forecasts: State Analysis, Wharton Econometrics, (Summer) 1987.

Broschat, Duane, Employment Projections to 1995 by Industry and Occupation, Job Service North Dakota, (May) 1985.

"The Business Situation," Survey of Current Business, Vol. 67, No. 7, July 1987.

Chimerine, Lawrence, Mariman Behravesh, and John Hagens, "Executive Summary: U.S. Outlook," U.S. Economic Outlook 1987-90, Wharton Econometrics September 1987a.

-----"Executive Summary: U.S. Outlook," U.S. Economic Outlook, Wharton Econometric Forecasting Associates, December 3, 1987b.

"Consumer Expenditure Survey Results from 1982-83," NEWS, USDOL/BLS 85-402, September 27, 1985.

District Economic Conditions, Federal Reserve Bank of Minneapolis, Vol. 3, No. 2, (2nd Quarter) 1987a.

-----Vol. 3, No. 3, (3rd Quarter) 1987b.

Economic Outlook USA, Survey Research Center, University of Michigan, Vol. 14, No. 2, (Summer) 1987.

Financial Letter, Research Division, Federal Reserve Bank of Kansas City, Kansas City, Missouri, Vol. 13, No. 5, May 1987a.

-----Vol. 13, No. 6, June 1987b.

Geographic Profile of Employment and Unemployment, 1980, Bulletin 2111, USDOL, (March) 1982.

Geographic Profile of Employment and Unemployment, 1986, Bulletin 2279, USDOL, (May) 1987.

Hakkio, Craig S., and Richard Roberts, "Has the Dollar Fallen Enough?" Economic Review, Federal Reserve Bank of Kansas City, Vol. 72, No. 7, July/August 1987.

Henneberry, David, Mark Drabenstott, and Shida Henneberry, "A Weaker Dollar and U.S. Farm Exports: Coming Rebound or Empty Promise?" Economic Review, Federal Reserve Bank of Kansas City, May 1987.

Lichter, Daniel T., and Janice A. Costanzo, "How Do Demographic Changes Affect Labor Force Participation of Women," Monthly Labor Review, Vol. 110, No. 11, pp. 23-26, (November) 1987.

1988 Ag Outlook, Prepared by Land-Grant University Economists from North Dakota, South Dakota, and Minnesota. Sam Brungardt (ed), Published as an insert to: The Farmer/The Dakota Farmer, September 19, 1987.

North Dakota Agricultural Statistics 1987, North Dakota Agricultural Statistics Service, Agricultural Statistics, No. 56, June 1986.

Pennar, Karen, Joan Berger, and Christopher Farrel, "That Rumble You Hear is Called 'Recession'" Business Week, No. 3024, November 2, 1987.

Personick, Valerie A., "Projections 2000: Industry Output and Employment Through the End of the Century," Monthly Labor Market Review, USDOL/BLS, Vol. 110, No. 9, September 1987.

Savacool, John, "U.S. Construction Overview," U.S. Regional Forecasts; Selected Areas, Chase Econometrics (First and Second Quarter) 1987.

Short-Term Energy Outlook; Quarterly Projections, Department of Energy/Energy Information Administration, July 1987a.

-----Department of Energy/Energy Information Administration, October 1987b.

Wharton Econometrics, "Regional Forecast: Short-Term State Tables," (Fall) 1987.

Wheat Market Review, North Dakota Wheat Commission, No. 216 November 19, 1987.

World Food Trade and U.S. Agriculture, 1960-1986, The World Food Institute, Iowa State University, 1987.

Zandi, Mark, "U.S. Regional Forecasts: Selected Areas," (Second Quarter), Chase Econometrics, 1987.

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New Town District Office
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Region 3
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Rolla District Office
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Region 4
Grand Forks Regional Office
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Grafton District Office
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UND Placement Office
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Region 5
Fargo Regional Office
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Fargo, North Dakota 58103
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Region 5--Continued
Wahpeton District Office
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429 Second Street Southwest
Jamestown, North Dakota 58401
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Valley City, North Dakota 58072
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Region 7
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Bismarck, North Dakota 58502
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Mandan District Office
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